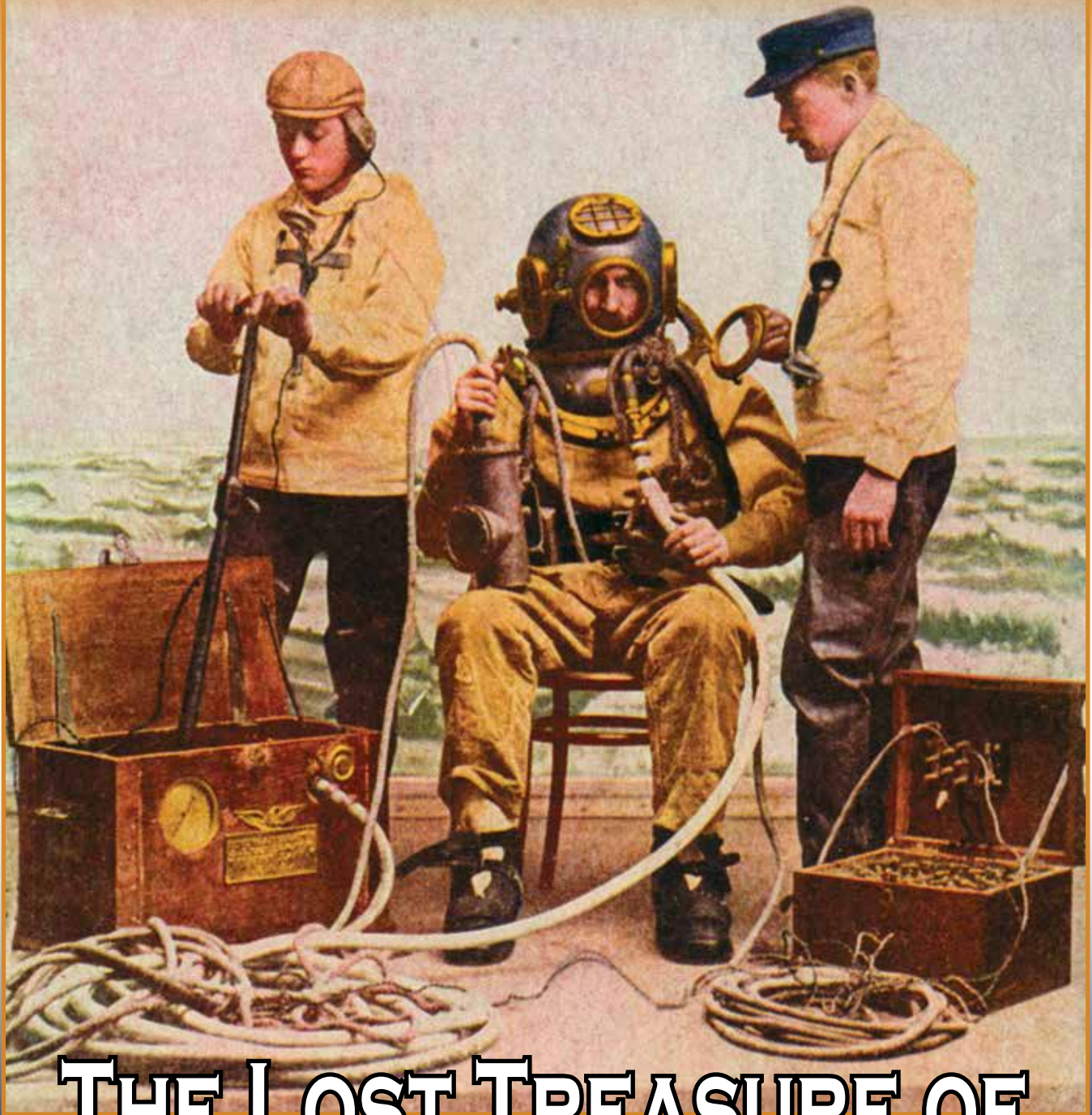




# The Journal of Diving History



Third Quarter 2016 • Volume 24 • Number 88



## THE LOST TREASURE OF CAPTAIN SORCHO

The Anthony and Yvonne Pardoe Collection Auction | Bob Kendall's Macro Camera | Under The Sea on a Glider  
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# THE JOURNAL OF DIVING HISTORY

THIRD QUARTER 2016 • VOLUME 24 • NUMBER 88

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By Jerry Kuntz

The career of Captain Louis Sorcho has been featured numerous times in prior issues of the Journal. As the self-proclaimed "Champion Deep-Sea Diver of the World," his public exhibitions gave the American public a first-hand glimpse of the equipment of a surface-supplied diver. Sorcho plied his trade in large water-filled tanks that the public could view into, and also introduced his wife, Frances Namon, as the "World's First Woman Deep-Sea Diver." Sorcho's travelling exhibitions produced numerous ephemeral pieces that have been acquired by both historians and collectors for decades. Dressed in a military-looking marching-band conductor's jacket decorated medals and awards of questionable merit, Sorcho was a master of self-promotion.

In this article author Jerry Kuntz reviews the various career claims that Sorcho made and provides details of Sorcho's diving and vaudeville career, including his famed calliope.



### 28 The Anthony and Yvonne Pardoe Collection Auction

By Leslie Leaney

The introduction of lightweight fiberglass diving helmets in the 1960's marked the beginning of the end for the traditional copper and brass diving helmets that had launched the trade of the professional diver over a century before. As these helmets were gradually retired from active service an international collectors market began to grow. The most internationally prominent of these collectors was the American Leon Lyons, who started in the 1970's and travelled the world to build his collection, which became the base for his 1988 book *Helmets of the Deep*. The UK's most prominent collector of that early period was Tony Pardoe. His collection was assembled over approximately five decades, and was the base for his 2012 book, *Diving Equipment Through the Ages*. Ill health recently started to affect Tony and he decided to sell his collection at auction. In this three-part report Leslie Leaney details some of the more interesting items that were sold.



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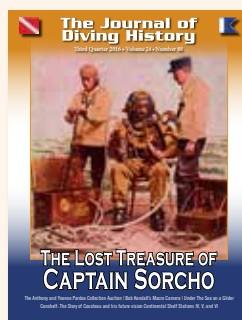
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A circa 1900 studio photograph of Captain Louis Sorcho and two tenders, scanned from a period postcard that is titled at the top "Souvenir. Capt. Louis Sorcho's Great Deep-Sea Divers." At the bottom of the card it states "CAPT. LOUIS SORCHO. Champion Deep-Sea Diver of the World in Full Submarine Armor." Courtesy of Jerry Kuntz Collection.

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Welcome to issue 88. I have just returned from the HDS Conference in Tacoma, Washington, where Society Director Ryan Spence earned my immediate admiration for his excellent display of American and European equipment celebrating La Spirotechnique's 70th anniversary. There were items displayed that I, and many other attendees, had never seen before including possibly the first public display in the United States, at least in this century, of an original large-label La Spirotechnique CG 45 regulator. A full report on the Conference will appear in a future issue but I would like to use this column to especially thank our international members Franck Machu of France, and Adair Ribeiro of Brazil, for making their long journeys to attend the Conference, and for their on-going support of HDS USA.

In addition to organizing this year's conference, Ryan has also stepped up to the plate to organize the HDS DEMA Decades display at the Las Vegas DEMA show, November 16 – 19. This display is normally organized and staffed by our Vintage Scuba expert Ed LaRochelle, who has had to take a break from his volunteer work for the HDS this summer as he is moving home and relocating. In between his HDS conference and DEMA work Ryan also managed to find time to contribute to this issue's *History of Manned Undersea Habitats* column. He is a living testament to the old saying that "If you want something done quickly, give it to a busy man." Many thanks Ryan!

In this issue we feature two contributions to early American diving history by author Jerry Kuntz. The first is our lead article on the colorful character of Captain Louis Sorcho, who gained fame from his public exhibitions of diving around the turn of the 19th century. The other contribution is Jerry's latest book, *The Heroic Age of Diving. America's Underwater Pioneers and the Great Wrecks of Lake Erie*, which is reviewed by Senior Editor Nyle Monday. Jerry is a relatively new contributor to diving history but his historical presentation at Beneath The Sea in New Jersey earlier this year certainly impressed both myself and former HDS Chairman Lee Selisky, who maintains a keen interest in the career of J.B. Green and diving in the Great Lakes. I strongly recommend Jerry's book to anyone with even a mild interest in very early American diving history.

The origins of the HDS are in England, and in June there was one of those "must attend" events there that only turn up every few years or so. The auction of the diving equipment collection of Anthony and Yvonne Pardoe was advertised in the *Journal* and elsewhere, and drew a large crowd to the Bearnes, Hampton, & Littlewood auction house in Exeter, Devon. Among the attendees were numerous HDS members, both domestic and international, who were there to bid on over 500 lots of collectible diving equipment. Over the years I have attended numerous auctions where diving equipment has been prominently displayed, but had never witnessed anything like the presentation assembled by Brian Goodison-Blanks and his auction house team. They say a picture is worth a thousand words, and Bonnie has laid out images in my article on this auction that will confirm that old truth. In fact, there was such an abundance of equipment that we have donated our normal pages for Helmets of the Deep and Helmet Auctions to this article.

As we come to the close of the third quarter "award season" in the recreational scuba industry is here again. Congratulations go to our Advisory Board members Bob Barth and Dr. Joe MacInnis, who were inducted into the International Scuba Diving Hall of Fame, and also to Nyle Monday, whose decades of research in to the Ohgushi Peerless Respirator was the key to its creators, Kanezo Ohgushi, Riichi Watanabe, and Kyuhachi Kataoka, also being inducted. Congratulations also to our Managing Editor Bonnie Toth, who receives the Academy of Underwater Arts & Science's NOGI Award for Distinguished Service during DEMA week in Las Vegas.

Enjoy your Fall diving and Bonnie and I hope to see you at DEMA Las Vegas.



**Leslie Leaney**  
*Executive Editor*



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# The Board of Directors are pleased to announce the recipients of the 2016 HDS Awards.



## HDS 2016 Diving Pioneer Award Jack Lavanchy

Jack was born in Switzerland prior to World War II and started his diving career in 1948 and took his first dive with Club Alpin Sous Marin in Cannes. Motivated by Cousteau's 1956 film *The Silent World*, Jack pursued a career in recreational diving. In 1965 he became Switzerland's exclusive agent for La Spirotechnique and subsequently Technisub. In 1968 he also became their agent for Germany and Austria. In 1978 he visited PADI in the United States and with Jurg Beeli founded PADI in Europe in 1983. Under Jack's leadership PADI Europe experienced double-digit growth, developing into Europe's largest diver training organization. JWLA Aqualung AG also enjoyed commercial success, and in 1995 Beeli and Lavanchy sold their shares in the company to Aqualung International. A consummate business professional and gentleman, Jack gained a stellar reputation for his friendly and ethical practices and was admired worldwide.

He was a valued member of the Historical Diving Society USA Advisory Board, and was European Underwater Federation Honorary Vice President. Jack passed away earlier this year and an expanded Memoriam article was published in issue 86 of the *Journal*.



## HDS 2016 Diving Pioneer Award George Wiswell

George Wiswell trained as a U.S. Navy diver during World War II and in 1962 started his one-man diving company in Connecticut using just a scuba diving rig. This operation quickly grew into Marine Contracting International and Wiswell expanded his diving services to the offshore oil industry in Louisiana and Texas. In 1962 he won a contract to replace trash racks at the Smith Mountain Dam in Virginia. The Westinghouse Cachalot system was introduced on this project, which became the first known commercial use of saturation diving. To combat the constant cold temperatures he dove under Wiswell developed a wet suit with built-in capillaries. The suits Wiswell developed went onto further saturation jobs in the Gulf of Mexico where Marine Contracting International worked on capping and killing wells in 200+ feet of water after Hurricane Betsy had destroyed them. Wiswell went on to develop other items of commercial diving equipment and was inducted into the ADCI Commercial Diving Hall of Fame in 2016. Further details of his career can be found in issues 74 and 75 of the *Journal*.



## HDS 2016 E. R. Cross Award Fred Barthes, New York

**F**red has been a booth volunteer and assisted with the Beneath the Sea/HDS Museum at the Beneath the Sea show in Secaucus for several years. He is a long-time member of the North East Diving Equipment Group (NEDEG) and Long Island Divers Association. Fred volunteers his time to bring the history of diving to schools and other dive clubs. He was instrumental in getting the HDS's message of preserving diving history to the East Coast Chapter of the Underwater Hyperbaric Medical Society. Fred's dedication to diving history brings him to Beneath the Sea each year to help Bob Rusnak (E. R. Cross Award Recipient) with a diving history museum and to help with the HDS booth. Congratulations Fred.

## HDS 2016 Nick Icorn Diving Heritage Award Dr. Andrés Clarós and Enrique Dauner, Barcelona Spain



Dr. Andrés Clarós



Enrique Dauner



**A**ndrés and Enrique receive the award for their organization of the 1st (2012, Tossa Del Mar, Spain) and 2nd (2014) international Meeting on Vintage Underwater Cameras and the vintage underwater camera exhibit at the Barcelona Maritime Museum (2014-2015). Dr. Clarós and Enrique spent two years developing the 2014 meeting and the display at the Maritime Museum. Dr. Clarós is a plastic surgeon and otorhinolaryngist. He, his brother, and sons operate Clinica Clarós. Dr. Clarós and his family also operate Foundation Clarós, which conducts humanitarian medical missions to Africa. Foundation Clarós has served over 3,000 patients, provided over 750 hearing aids and installed over 40 Cochlear implants. Andrés' love of underwater cameras is evident in his massive collection and his dedication to, and promotion of, the history of underwater photography. Enrique Dauner received his education in biology with a special interest in reptiles. He is the author of over 200 articles and reports published in various magazines, and how-to books on terrariums and aquariums. He is a diving instructor, an accomplished aerial and underwater photographer, and teaches underwater photography in universities. His most recent book is *Fotografia Subacuática* (Underwater Photography). Enrique is a dedicated diving historian and sits on Board of Directors for HDS Spain.





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# The Lost Treasure of Captain Sorcho

By Jerry Kuntz

Captain Louis (Luigi) Sorcho was a helmet diver/showman from the late 1880s to the early 1920s.

During his performing career, Sorcho gave various accounts of how he became a diver. He often stated that he had been born in Pennsylvania and represented the third generation of a family of divers. Moreover, he boasted that he had been employed by the U.S. Life-Saving Service (the predecessor of the U. S. Coast Guard) on the Great Lakes. However, no records have been found that would substantiate this version of his history.

As years went by, that particular back-story faded away and was replaced with the claim that he joined a tugboat service in New York as a youth, and in that position, he learned to dive under the eye of Captain Metcalfe, the “greatest living submarine diver.” However, no newspaper citations of a diver named Metcalfe have been found, nor has any mention of Sorcho been found prior to his first public exhibitions. Sorcho’s early publicity releases also proclaimed that he was “the Hero of the Nile,” who, in 1884, had been employed as a messenger by British General Gordon to convey messages from Khartoum by swimming 1000 miles down the Nile.<sup>1</sup> However, that highly suspect claim was redacted in later biographical sketches.

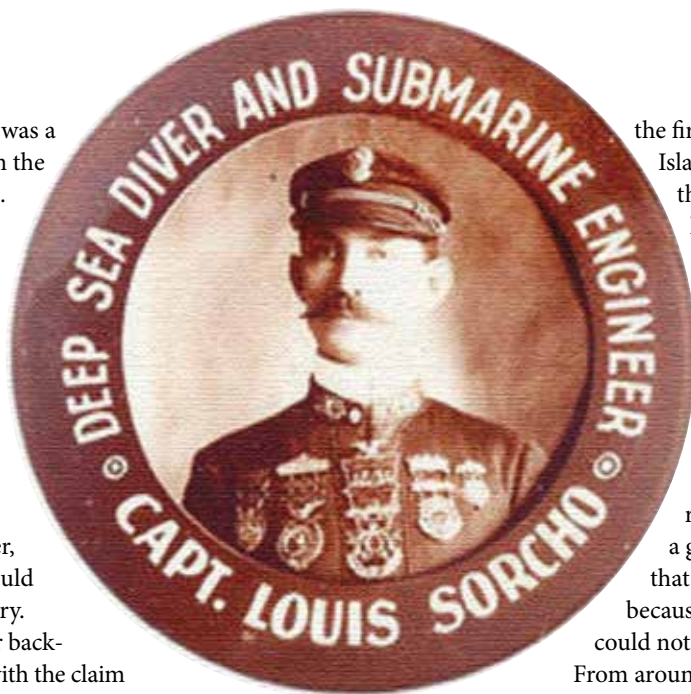
Sorcho began his show business career in Chicago in 1888 by reproducing the swimming exhibitions of Paul Boyton.<sup>2</sup> Boyton, one of the great American adventurers of the nineteenth century, amazed crowds with his ability to do stunts in the water while wearing an early rubber dry-suit invented by Clark S. Merriman. The suit included air pockets to add buoyancy, so floating was effortless. Boyton used the suit to float down major rivers of America and the world, and even crossed the English Channel.

Boyton was also the first to realize that the suit had military value, as a combat swimmer could position torpedoes close to anchored ships. While working as a mercenary in Chile, Boyton demonstrated how swimmers could be an effective force. He was captured and faced execution, but was later released. After returning to America, Boyton entered the entertainment business and started

the first gated amusement park at Coney Island. He introduced early versions of the roller coaster and water slide, and later opened other amusement parks in several other cities.

Sorcho’s first performing act was to imitate Boyton’s feats of distance swimming with the Merriman suit. He later expanded his performance to give demonstrations at lakes and docksides of Boyton’s stunts of reading, eating, flag waving, and firing a gun while treading water--stunts that audiences found startling, perhaps because the vast majority of the populace could not swim at all.

From around 1888-1890, Sorcho toured with the company of the play *Lost in New York*, one of several “aquatic dramas” or “tank plays” that flourished in the late 1800s that prominently featured large tanks of water as part of the set.<sup>3</sup> Sorcho’s contribution to the drama was to perform stunts in his Merriman suit in the water tank. By the mid-1890s, it appears that Sorcho repeatedly returned to the Atlanta, Georgia, area to give his demonstrations





and also to be the resident swimming instructor at nearby summer resorts.<sup>4</sup> He listed Baltimore as his permanent residence.

It was during this period that the first documentation can be found that Sorcho had some expertise in helmet diving. In June of 1895, he was recruited to use his diving equipment to help recover a drowning victim from a lake near Atlanta. He and others from his crew took turns using his diving suit; among them was his future wife, Frances Namon.<sup>5</sup>

Capt. Sorcho married Frances Namon on Mar. 24, 1896 in Fulton, Georgia. Her birth name was Fanny Charlton; where she picked up the last name "Namon" is a mystery--perhaps hinting at an even earlier marriage. Less than a year after her marriage to Sorcho she was appearing in his deep-sea diving act with a featured role as the "World's First Woman Deep-Sea Diver."<sup>6</sup>

In early June 1899, she assisted in Sorcho's exhibit at the Electrical Show at Madison Square Garden in New York City. Sorcho was there to show off his diver's telephone system and searchlight. Meanwhile, another exhibitor at that show was also using a water tank to demonstrate his new signaling device.<sup>7</sup> A model boat was operated by Nicola Tesla using wireless remote control--the first public demonstration of radio. Is it possible that Sorcho and Tesla shared the use of the same tank?

Following the Fall months of 1899, Sorcho and Frances Namon's careers separated. In the 1910 Federal census, Sorcho, who was staying in a boarding house in New York City, still indicated he was married, not divorced, and that he had been married for over 10

years. No divorce record for Sorcho-Namon has surfaced, so it may be that Sorcho and Namon dissolved their marriage as many did in show business at that time, without any legal notice.

While Louis Sorcho toured vaudeville theaters in winter months, the hotter summer months allowed him to set up his tank under canvas tents at state fairs, carnivals, expositions, and amusement parks: venues that brought him more profit than small theaters. His large tank was 20 feet wide and 10 feet high; when filled it weighed about 65 tons. One newspaper described the show in detail:

To make the scene more realistic it [the tank] is filled with live fish, which swim around the diver. The catching of eels under water and the handling of them the same as a child would a kitten is one of the difficult feats performed. He illustrates pearl, coral and sponge diving; caulking a sunken vessel's seams from the outside; planting and firing submarine torpedoes; use of the submarine telephone and searchlight; searching for treasure under the water; and reading and writing at the bottom of the sea.

In one act the lights are extinguished and the tank is supposed to represent the hold of a sunken vessel. Searchlight in hand, with its powerful rays gleaming under the dark water, the diver appears, looking like one of the weird monsters of the deep described by Jules Verne. The treasure closet is located, and by the light of the search lamp bags of gleaming gold are disclosed. True to life, the diver helps himself first and pockets a goodly share. Then he makes a line fast to the chest and sends the remainder to



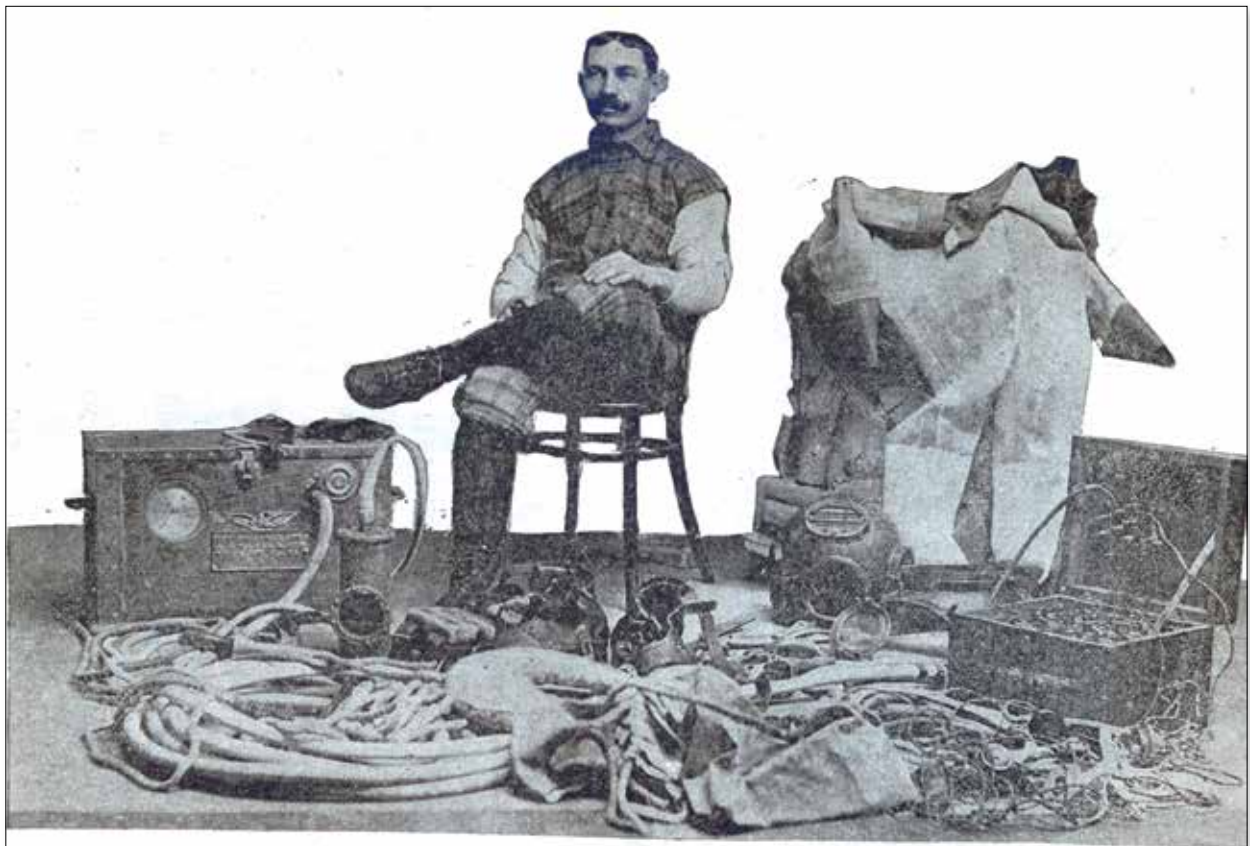


PLATE I.—SUBMARINE DIVER'S COMPLETE OUTFIT.  
*Described in Easy Science in this, and succeeding numbers.*



PLATE II.—DIVER PUTTING RIGHT FOOT INTO LEG OF SUIT.





PLATE III.—TIGHTENING BAND AROUND WAIST.  
(Described in *Easy Science* in this number.)



PLATE IV.—ASSISTANTS SCREWING DIVER'S BREAST-  
PLATE TO UPPER PART OF SUIT.

the surface. Nearly all divers do the same thing when they work on a treasure ship.

Another act is known as the 'cut-away.' It is to this a diver must resort when his air hose and lifelines are hopelessly entangled and he cannot be drawn to the surface. He cuts away his belt of weights with his knife, slashes the hose and life line and attempts the risky feat of rising to the surface with the air that is left in the armor...

In the year 1898 an event occurred that would put into motion vast changes in how diving was viewed in the United States. An explosion sank the USS *Maine* in Havana Harbor, killing scores of sailors. Tensions between the USA and Spain, which governed Cuba, had already been high. Although suspicions of a torpedo or mine attack were rampant, the US Navy was charged with discovering the cause of the explosion as quickly as possible. Since all the evidence lay at the bottom of Havana Harbor, divers were called in to recover the dead and to determine what had happened. For the diving community, the *Maine* site became something like Woodstock in 1969--dozens of divers either said they were there or offered their professional opinion on what would be found--without ever having seen the wreck. The government reports on the *Maine* incident do not mention any divers by name, but do refer generically to "Navy divers," implying that the work was done by Navy personnel (and there were many capable divers in the U.S. Navy, although their equipment was not standardized.)

It is conceivable that private wrecking divers might have been contracted to assist in the effort. It seems less plausible that the Federal government would call upon the services of a boastful carnival showman, but according to Captain Sorcho, that is exactly what happened. In fact, by reading Sorcho's press release, one could conclude that he started the Spanish-American War by himself:

...He [Sorcho] was at once accepted as the most expert submarine engineer in the country, and within five days he was descending in the dark slimy waters of Havana harbor amid the tangled wreckage of the stricken battleship. What others dared not attempt he accomplished with the greatest apparent ease and skill. From out of the frightful charnel house of death he brought body after body of gallant sailor men until the hearts of those about him sickened. Day and night he worked in that dangerous twisted and torn mass, recovering the dead, and when the last body that could be gotten out had been sent up he turned his attention to the wreck; and it was his testimony and investigation that gave the court of inquiry its first proof that the ship

had been blown up by external explosives and that her magazines had not exploded as the Spanish claimed. The establishment of this fact by the intrepid captain [Sorcho] sent a wave of indignation across the continent, which grew and grew until finally broke in the bays of Santiago and Manila to the destruction and confusion of the Spanish fleets.<sup>78</sup>

Captain Sorcho enjoyed displaying medals on his uniform--which was not military issue--it was a marching band conductor's suit. He maintained a mustachioed appearance that many compared to a Prussian officer. Sorcho contrived to have several chest medals awarded to him by his exposition and fair sponsors for performing a unique feat--repeatedly breaking his own record for the length of time spent underwater by a diver. It was a trivial accomplishment--staying underwater in a diving suit in a glass tank at a depth of a few feet (in warm water) bore no relation to real diving conditions. Sorcho broke his own record numerous times: 6 hours; 7 hours; 7½ hours; 8 hours, etc.--and picked up a medal each time.<sup>9</sup> If he deserved a medal at all, it was for self-promotion.

At certain outdoor venues, such as at the Greater America exposition in Omaha, Nebraska in 1899, Sorcho would supplement his tank show with an act he could perform on open water. At Omaha, Sorcho staged a recreation of the recent Battle of Manila Bay by using a small, single-person boat launch customized to look like a scale-model of the flagship of the U.S. Navy's Pacific Fleet, the *USS Olympia*. During this mock-battle, Sorcho piloted the launch across the length of the Omaha fairground's large man-made lagoon. Small mines exploded around him, representing the artillery battery that was fired at the fleet in Manila Bay. The mines were marked by buoys, so Sorcho just had to steer along the marked channel to avoid the mine blasts.

However, during the show on Oct. 6, 1899, things went awry. Just before Sorcho started his mock-battle, a fairgoer's rented swan-boat wandered through the Sorcho's marked channel and dislodged a few of the mine buoys. Sorcho, standing at the helm of his battleship launch in his full-dress uniform, began his run through the gauntlet of mines a few minutes later. The first mines erupted in geysers to the port and starboard of Sorcho's launch, and he calmly proceeded full-steam ahead. However, the next mine he passed went off just inches from his boat. Sorcho was knocked unconscious and was thrown into the water. The audience gasped in shock as two fair employees jumped in the lagoon to rescue the Captain. Sorcho was pulled ashore and was slowly revived, shaken but not seriously injured.<sup>10</sup>



PLATE V.—ASSISTANTS ADJUSTING DIVER'S HEAVY ROPE SUSPENDERS TO SUPPORT OVERALLS WHICH PROTECT THE RUBBER AND CANVAS SUIT UNDERNEATH.



PLATE VI.—ASSISTANTS ATTACHING DIVER'S TELEPHONE RECEIVER, OVER WHICH HELMET FITS.

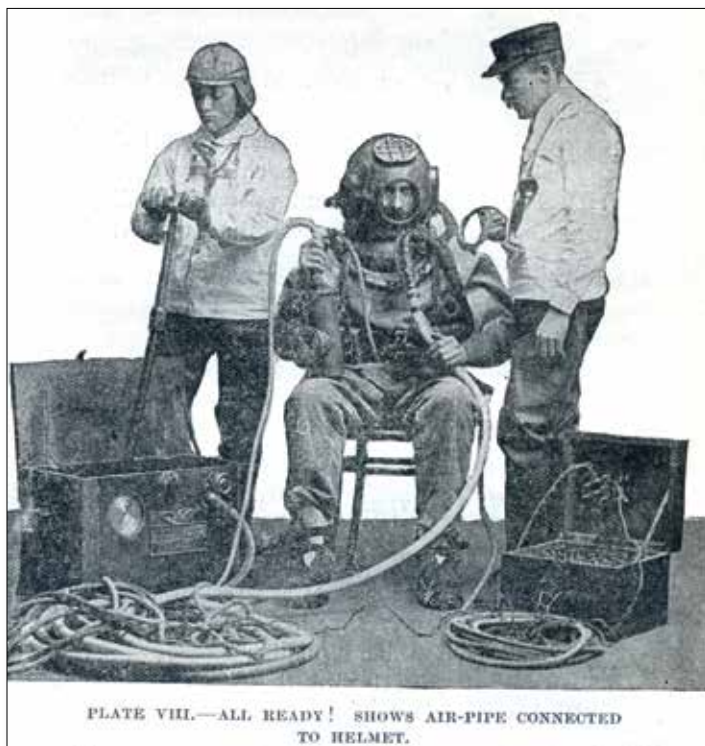


So it was that Captain Sorcho was knocked senseless--thanks to an errant swan-boat on a lagoon in Omaha, Nebraska; and therefore suffered worse casualties than Commodore Dewey's entire fleet had in the real Battle of Manila Bay. However, on this occasion it is unlikely the gallant hero received another medal to pin on his chest.

After the onset of World War I, Sorcho re-tooled his act to include a mock battle between U-boats and Allied convoys. He now claimed to have been a former associate of Simon Lake, the builder of the first submarine vessels for the US Navy.<sup>11</sup>

While profitable, Sorcho's deep-sea diving act by itself was not enough to maintain his interest. One outlet for his boredom was a device he purchased to help attract fairgoers to his tent-show: a compressed-air calliope that he called his "Ballyhoo." Sorcho embellished the calliope with a foghorn, a bell, a megaphone--and a belly dancer. Some who heard it declared it "the worst invention devised by mankind." It was impossible to ignore, a fact which caused some trouble for Sorcho among fair managers who complained that the Ballyhoo ruined concert events and drowned out all other barkers at their venues.<sup>12</sup>

Another hobby interest that Sorcho developed was photography; over the years he invested thousands of dollars in the best camera equipment available. It was a pastime that was to cause him worlds of trouble. In 1915, while touring in England, Sorcho, one of his assistants, and an American newspaper reporter obtained permission to take photographs of the property damage caused in London by anti-German riots. The mobs had not yet dispersed when the three men arrived in one of the riot districts. Sorcho, with his Kaiser Wilhelm mustache, was immediately mistaken for a German. A woman shouted, "They are German-American spies! Kill them! Remember the *Lusitania*!" The three Americans broke free from the mob and jumped on a passing streetcar, but not before Sorcho was hit in the head by a woman swinging some sort heavy object at him.<sup>13</sup>



Two years later, while Sorcho was touring theaters in the Pacific Northwest, a brakeman on the Northern Pacific noticed that Sorcho had set up his camera on the train and was taking pictures of all the bridges and tunnels they passed. The brakeman brought this to the attention of the Bureau of Investigation, the predecessor of the FBI. The Bureau launched an investigation of Sorcho under the Espionage Act of 1917. In pursuing the case, Bureau agents interviewed Alexander Pantages, the magnate of the Pantages vaudeville circuit, and asked him about Sorcho's behavior. Pantages explained that he was aware of Sorcho's hobby of photography, and that he mostly used his cameras to take his own publicity stills. Pantages also related that Sorcho was an incorrigible womanizer, who frequently tried to lure attractive female performers on the show tours into his photographic darkroom. Pantages scoffed at the idea of Sorcho being a spy.

A second complaint was made against Sorcho by a fellow actor while both he and Sorcho were showing in Oklahoma City in August 1917. Perhaps the man had been angered over the advances Sorcho made on a female cast member, but at any rate he accused Sorcho of impersonating a naval officer and of being secretive about the photographs he had taken. The complaint also mentioned that Sorcho posted a large guard to prevent prying eyes from getting near his photographic equipment. On the basis of this second complaint, the Bureau of Investigation arranged an interview with Sorcho. In the interview, Sorcho explained his background, his uniform, and his support of U.S. military recruitment efforts. The Bureau agent in Waco concluded:

"I went through this man's effects and found nothing of an incriminating nature, and he informs me that the Photographic Outfit he has with him is for the purpose of photographing the Play Houses he visits and showed the employee [the Bureau agent] hundreds of these play-houses."

Very few photographs now exist of these long-forgotten vaudeville theaters; and those images that do exist were not taken with top-of-the-line camera equipment like Sorcho had. Sorcho's collection of photographs would now be regarded as an invaluable archive--it would be worth a fortune. So while Sorcho never found any riches underwater, he created one as a hobby--a treasure now lost.

Sorcho had remarried in the mid-1910s, but he and his second wife were childless. After retiring from show business around 1920, Sorcho spent his last years renting out his Ballyhoo calliope. He died of heart disease in New York City in May of 1929 at age 64. He was survived by his wife Myrtle, who soon remarried. No one knows what Myrtle did with Sorcho's photograph collection. 🐼

#### (Endnotes)

- <sup>1</sup> "A Novel Exhibition," Fort Worth Gazette, Jan 10, 1889, p. 8.
- <sup>2</sup> "City Brevities," Milwaukee Sentinel, Oct 16, 1888, p. 2.
- <sup>3</sup> "Lost in New York," Galveston Daily News, Jan 26, 1889.
- <sup>4</sup> "A Water Show," Atlanta Constitution, Sep 10, 1893, p. 18
- <sup>5</sup> "Dragged the Lake," Atlanta Constitution, Jun 11, 1895.
- <sup>6</sup> "She's a Deep Sea Diver," Newark Daily Advocate, Oct 9, 1896, p. 4.
- <sup>7</sup> "Under Water 7 1/2 Hours," New York Times, Jun 1, 1899, p. 8.
- <sup>8</sup> "Will Endeavor to Locate Body," Manitoba Free Press, Jul 24, 1903
- <sup>9</sup> "Sea Diver's Great Feat," Newark Daily Advocate, Jan 8, 1902
- <sup>10</sup> "Blown From the Olympia," Omaha Daily Bee, Oct 6, 1899, p. 3.
- <sup>11</sup> "At the Amusement Parks," New York Tribune, Jun 16, 1916, p. C4
- <sup>12</sup> "Ballyhoo," The New Yorker, Jul 21, 1928.
- <sup>13</sup> Three New Yorkers Mobbed," New York Times, May 15, 1915, p. 2.

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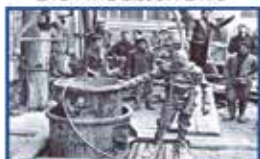


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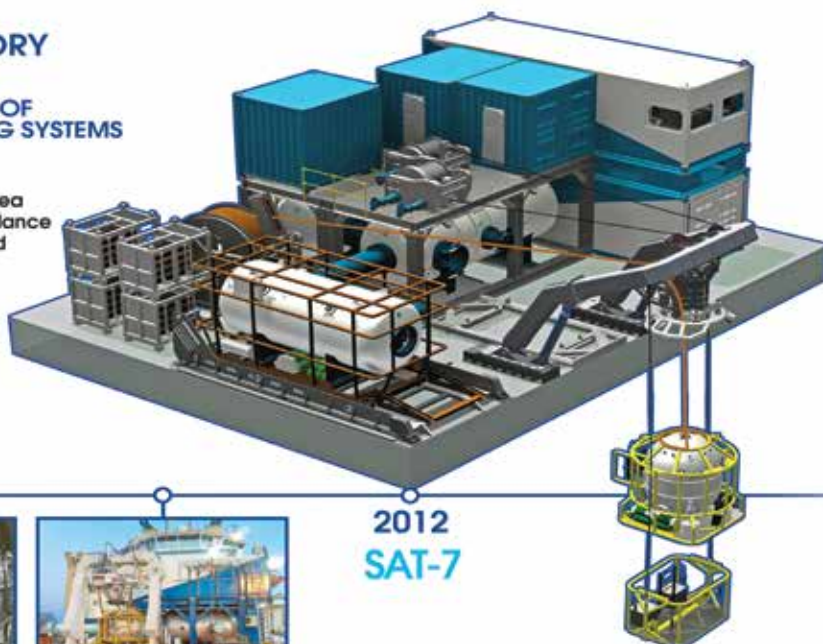


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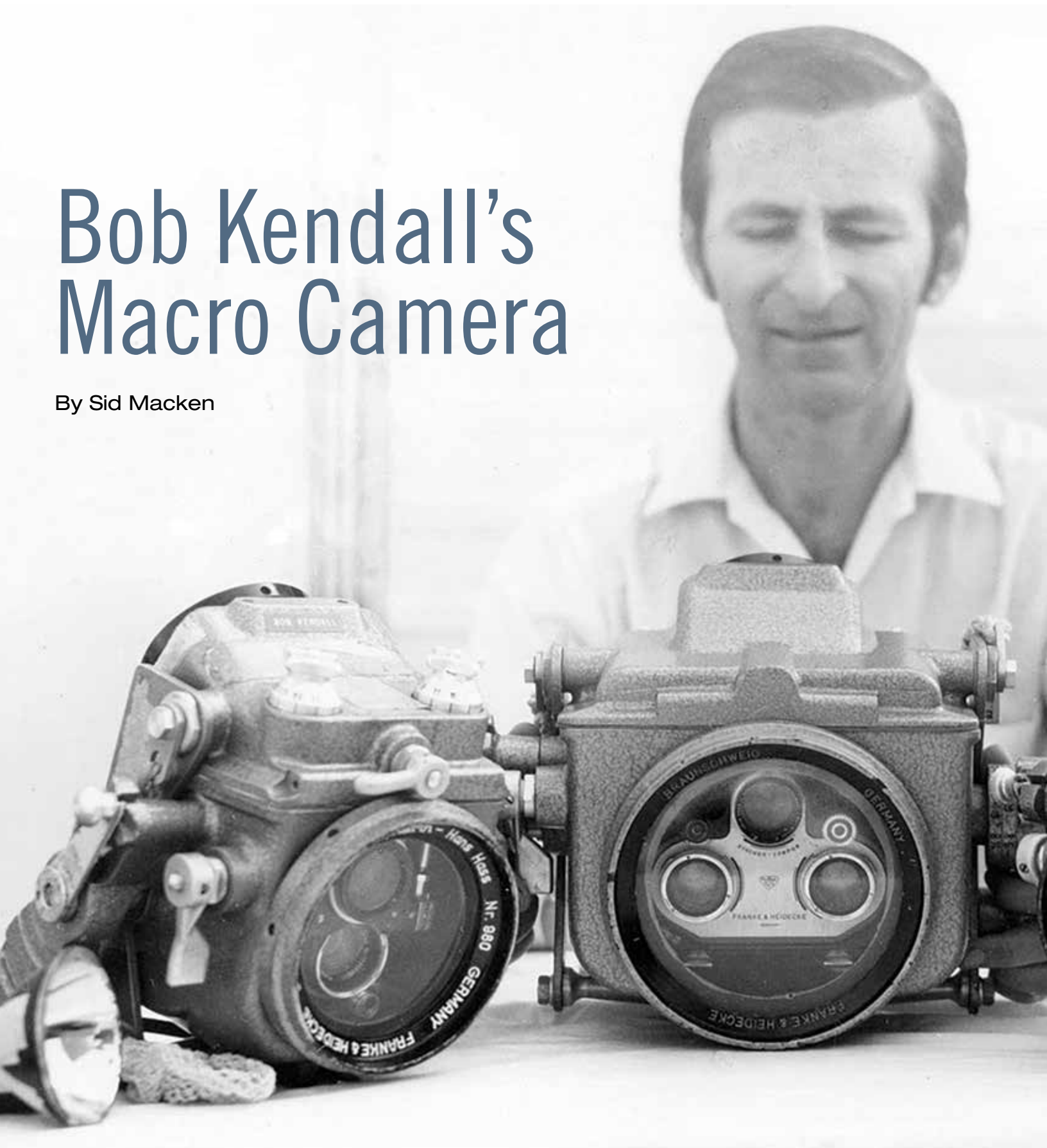


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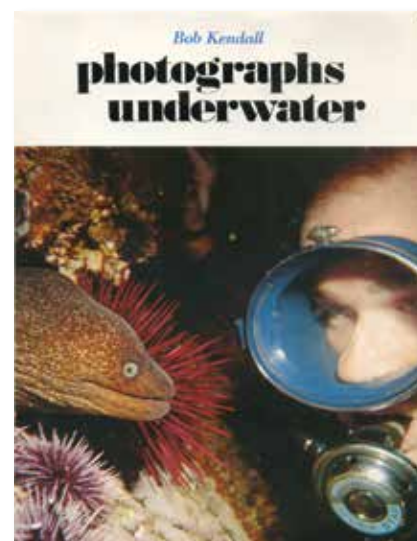
# Bob Kendall's Macro Camera

By Sid Macken





Robert Kendall, Ph.D., was a multi-talented physical oceanographer, pilot, prolific writer and award winning photographer. Among his many accomplishments, beginning in the 1950's Bob photographed Greek sponge divers for *National Geographic*, taught math and physics for a time at the Institut Montana in Zugerberg, Switzerland, did special effects cinematography for the movie *Guns of Navarone*, dove to 5,000 feet in the Nekton submarine on California's Cortez Bank, and participated in underwater archaeological expeditions with Peter Throckmorton. Many of Bob's photographs are displayed in his 1976 book, *Photographs Underwater*. Bob Kendall was also a designer of underwater housings and cameras including a panoramic camera with a 355° X 20° field of view. Shown here is very unique example of Bob's meticulous design work.

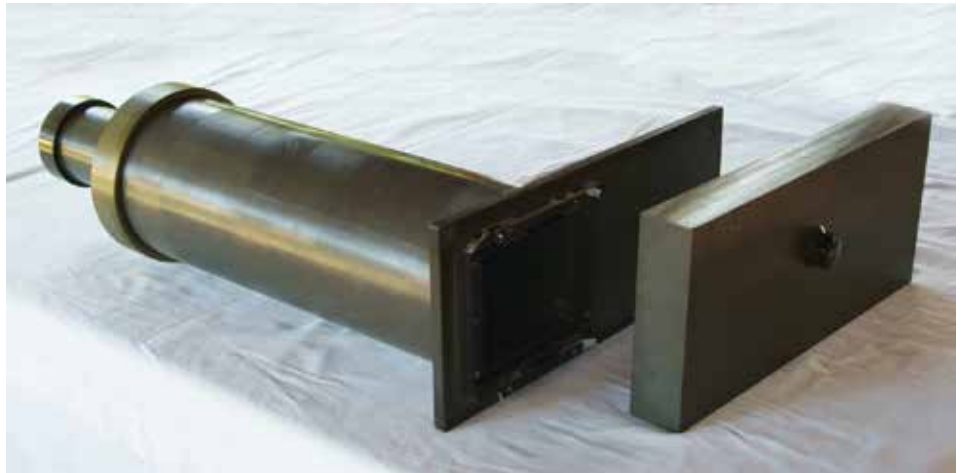


*Photographs Underwater* by Bob Kendall, published 1976, chronicled many of Bob's adventures diving around the world

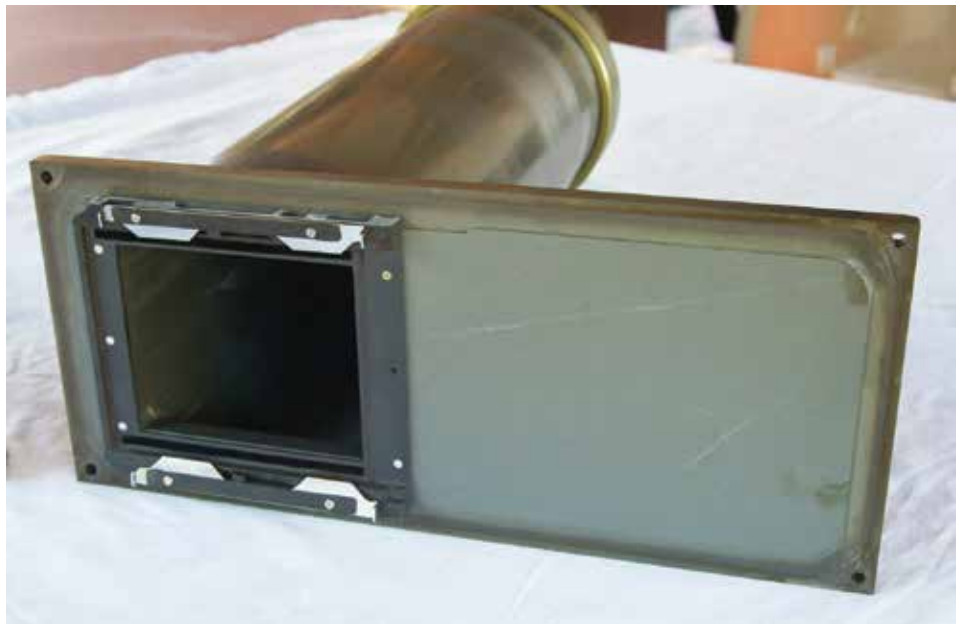


A deceptively simple camera, it is composed of only three parts; a machined aluminum body, lens, and film holder. It was designed specifically for underwater macro-photography. The housing is odd looking, but the initially baffling design has some very specific features. Once understood, the simple functioning of the camera is apparent.

The smaller diameter cylinder contains the lens port and is welded to a round plate. This assembly is secured to the larger cylinder by a brass collar. A machined rectangular aluminum block is welded to the other end of the large cylinder. The cavity of the machined block contains a clip assembly and is covered by an aluminum plate and sealed with an o-ring. Attached to the cover plate is a rack and pinion gear which is operated by a knob on the outside of the housing. There are no provisions for a shutter or shutter release, focus, aperture control, or for viewing the subject. At the front end of the large cylinder, there are four holes which penetrate the the housing. At the back of the housing, a clip assembly surrounds the opening into the large diameter cylinder. So, how does this thing work?



Rear view of the macro-camera body showing knob to control film change



Above. The bracket that holds the Graflock film holder. The large space to the right allows for movement of the dark slide in the film holder.



The body of Bob Kendall's macro-camera

The lens is an f3/250mm Heidosmat projection lens, made by Franke/Heideche, manufacturer of the Rolleiflex camera and Rolleimarine underwater housing. For macro photography, lenses are often used in a reversed position in front of the film and, indeed, the lens will only fit into the housing in this position. Though not present, there would need to be some form of bracket to hold the lens in place, and such a bracket could fit around the lens and extend through the four holes to be secured by nuts and sealed against water intrusion. There is no way to change focus of the lens. The lens to subject distance is fixed and would have to be measured prior to taking the photograph or determined by some form of focussing aid such as a wire frame.

The clip assembly at the back, mates to a Graflex 4X5 Graflock film holder. The rack and pinion connects to the film holder to change film between exposures.

Since there is no shutter built into the camera, and since macro photography severely limits the amount of light reaching the film requiring long exposure times, using a simple lens cover and artificial lighting to control exposure appears to be a practical solution.



T. Robert Kendall, Ph.D.  
Photo courtesy of Inge Kendall Maranto



The rack and pinion which operates the slide for changing film



The Heidosmat f3/250mm lens shown in the position it would be mounted in inside the camera housing.



Bob had also designed similar appearing housings for Kowa 6 medium format cameras which would incorporate the features missing on this fixed focus, fixed aperture design. However used properly, this simple camera could produce some remarkable images of very tiny marine creatures.

Bob Kendall has been described as a man with an insatiable appetite to understand and document God's creation. His career was cut short at the age of fifty two. It is interesting to ponder on what he may have accomplished given more time. 🐙

Photos by author



Kowa 6 cameras. The camera on the left has an f3.5/150mm lens. Photo courtesy of Inge Kendall Maranto



Bob Kendall's macro housing for the Kowa 6 camera. Photo courtesy of Inge Kendall Maranto



Bob Kendall's macro housing for the Kowa 6 camera. Photo courtesy of Inge Kendall Maranto



Bob Kendall was a devoted underwater photographer with a fascination for macro photography. This example shows the detail he was able to achieve in his photos. Photo courtesy of Inge Kendall Maranto



# Under The Sea on a Glider

by Richard F. Dempewolff  
Popular Mechanics, October 1952

The underwater sled featured in this article is called Manta and was originally developed in France by Pierre Vanlaer who was a member of Club Alpin Sous Marin in Cannes. If we accept that the first Aqualungs became available in the USA in 1948 and know that first issue of *The Skin Diver* magazine was published in December 1951, then the Manta certainly qualifies a piece of vintage scuba equipment. Dempewolff's text gives details of the Manta and is an example of the regular flow of equipment information across the Atlantic from France to the USA in the very early days of recreational scuba diving.

The Manta got more international press attention when Britain's Lord Mountbatten dove with it in 1954. Adda Rebikoff recalled the event in an article by John C. Fine in issue 21 of *Historical Diver* magazine.

When the Last Viceroy of India, Lord Louis Mountbatten, visited Cannes, he would dive with the Rebikoffs. "Vanlaer, a member of the Club, designed the Manta. A big triangular 'engin' with a viewing port. It was towed by a boat and

directed by the diver who could send it up or down or right and left," Ada said. "We had a little boat and Vanlaer asked Henri Broussard and Dimitri (Rebikoff) to go with him and tow the Manta so Lord Mountbatten could try it out," Ada recounted. "We met Lord Mountbatten at sea. He was aboard a British warship at anchor in the harbor. He came off and aboard our little diving boat. Lord Mountbatten put on a mask, fins and the scuba equipment and got on the Manta. Dimitri took underwater photos

and I took several pictures from our boat. Lord Mountbatten's mask leaked and it had to be refitted. He got back on Manta and dove again. The Manta was a little clumsy in the water and after a time diving Lord Mountbatten came back aboard our boat," Ada said, looking at the early photographs taken of this memorable day on the Cote d'Azur.

Lord Mountbatten was killed in his boat by a bomb planted by the Irish Republican Army on August 27, 1979. – Leslie Leaney







Goggled and helmeted, the prone pilot grips the controls that operate ailerons to make the wing dive or bank. One red aileron is seen at left

Compressed-air bottle is strapped to pilot's back. Each bottle provides 30 minutes' air supply and the pilot can wear three of them if he wishes



feet below the surface, gliding over the ocean bottom at 10 miles an hour. He banks and turns like an airplane as he skirts the reefs and rocks on a thrilling ride. According to enthusiasts, it surpasses anything the barnstorming pilots ever tried in the way of "buzzing" or hedgehopping with an airplane.

The wing, called "Manta" after the deep-sea monster it resembles, is the brainchild of a French aviator-sportsman named Pierre Vanlaer. As a member of the Under Sea Alpinist Club at Cannes, the inventor was dedicated to exploring and spear fishing among the reefs that stud the ocean floor along the Riviera.

Despite the fact that with air mask, goggles, webbed feet and rubber suit he could browse at a depth of about 200 feet for 20 minutes, Vanlaer wasn't quite satisfied. He wanted to get around the bottom faster, cover lots more territory, waste fewer precious minutes getting down there, and to be at Davey Jones' door without having used up all the energy it takes to swim down that far.

There's nothing really new about diving boards. For untold centuries natives on the Niger River in Africa have been tying themselves to flat boards with downward-sloping prows. When tugged against the current by men on the shore, the board would submerge, fisherman and all, and the man on deck could leisurely spear any fish that happened by, without exerting himself.

Based on the same hydrographic principles as those primitive boards, Vanlaer's great submarine wing, weighing 550 pounds under ballast, is one big hydrofoil, scientifically





Ready for an underwater "flight," the wing weighs 550 pounds. Over 100 pounds of that weight is ballast

contoured in wood and cork. The outer surface is sheathed in a plastic skin, coated with several layers of paint. Beneath the wing, two keels project to prevent the craft from whipping and rolling while cruising beneath the sea. At the end of each keel is the vertical vane of a rudder. Along the Manta's trailing edge are the ailerons, providing an up-and-down or "bank" control, and a collapsible signal mast rises from her stern. It swings down when the wing is deep underwater, can be pulled vertical to signal the towboat when the wing is ready to surface.

The pilot lies prone on top of the wing. In front of him is a shield of heavy transparent plastic that acts in the water as a windshield would on dry land. Without the protection of this shield, the tremendous force of the water pushing against him would tear the diver's helmet from his head.

The pilot guides his craft under the sea

in much the same way an airplane pilot maneuvers an aircraft. His feet are hard against the rudder bars which activate both rudders simultaneously. His hands rest on a pair of bars that move back and forth independently, and tilt either aileron to any desired degree. To execute a left turn underwater, the pilot pulls his left aileron up, his right one down and kicks the right rudder bar. The undersea wing banks over like an airplane and around she goes in a long, swooping turn. She climbs when the ailerons are tilted up and noses over in a dive when they're tipped downward.

"On a towrope 300 feet long," says Vanlaer, "and hauled at a speed of one to eight knots by a speedboat, she'll dive 125 feet in a 22-degree descent. The longer the rope, of course, the deeper she'll go. She'll dive as deeply as any man's physical condition will stand. Instead of one air bottle—good for a full 30 minutes since the diver doesn't





Sliding into the blue Mediterranean at the end of a 300-foot line, the wing and pilot prepare for a dive

need to exert himself—the Manta carries three, giving her passengers a one-and-a-half-hour ride. What if the rope breaks? As soon as she loses speed, she bobs to the surface like a cork.”

Because of its buoyancy and sensitive

controls, an undersea-wing pilot has to watch himself on the turns or he’s liable to slew into a barrel roll, catch the force of the water under the wing and flip up out of the ocean.

Vanlaer tells how embarrassed he was

Below left, red objects are rudders controlled by foot pedals. Right, pilot displays a souvenir of a flight

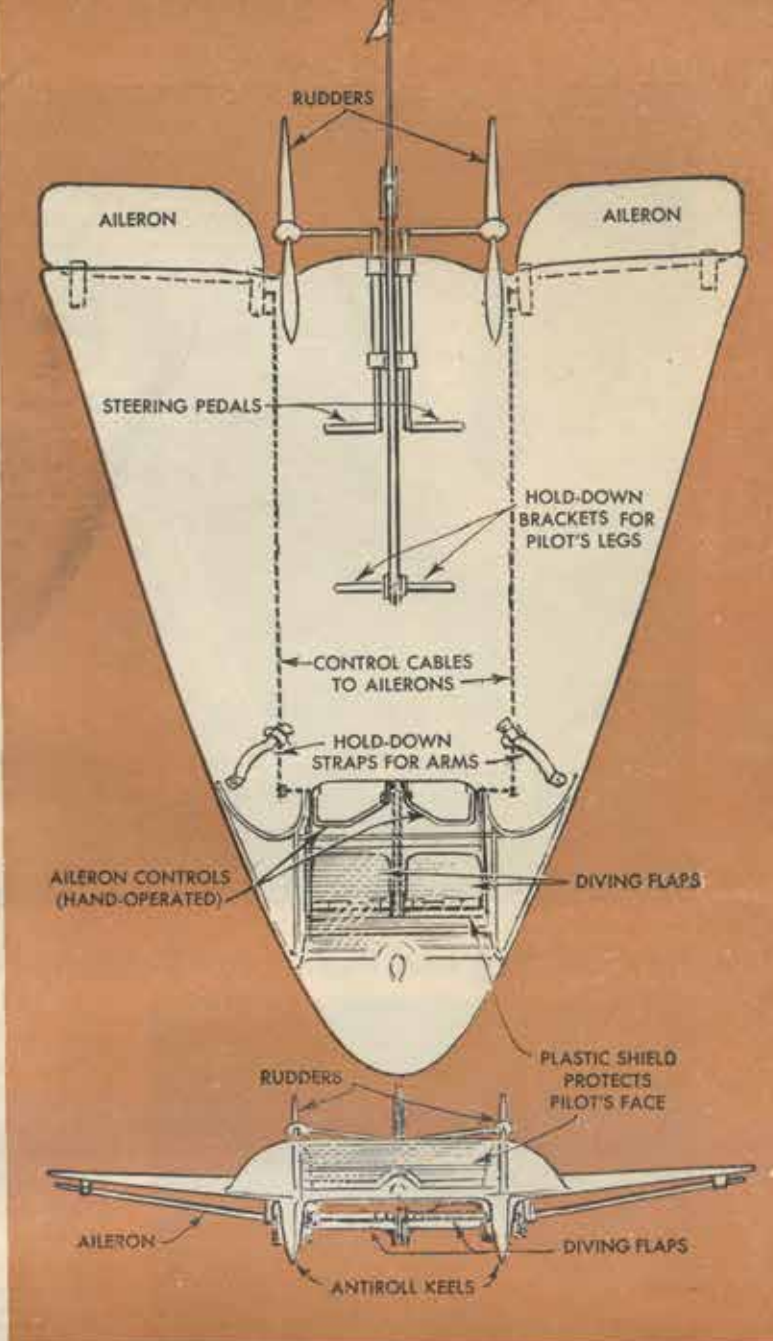




when on the wing's first sea trial, the Manta flipped from the water, broke her towline and headed for shore at a lively clip, landing high and dry.

A second run that afternoon was more successful, and the Manta has been going strong ever since. Vanlaer is rigging an electric signal system to connect the Manta with the towboat by a two-way circuit that will be entwined in the towrope. A battery on the boat will provide power to ring a bell activated by a button control on the wing. Thus a Manta pilot, by a system of code signals, will be able to order course and speed changes while soaring beneath the sea. Vanlaer is also designing an engine which he hopes will provide the Manta with its own propulsion system and make it completely free to wander around the ocean floor unhampered by the limitations of a towrope. "A good pilot," he points out, "can easily perform all kinds of maneuvers as it is—barrel rolls, ups and downs, climbing and diving turns."

As it stands, Vanlaer considers the Manta a perfect vehicle for scientific study of undersea flora and fauna over wide areas. A Manta rider uses half the air a regular diver consumes in his underwater excursions. ★ ★ ★



Two drawings, above, show the details of the underwater wing. Flag is used as a signal. When the pilot nears the surface, he raises flag as it is at left so the crew of towboat can see it





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# The Anthony and Yvonne

**Bearnes, Hampton & Littlewood**

Exeter, Devon, England

June 15, 2016

**By Leslie Leaney**





# Pardoe Collection Auction

## Part 1.

*The following auction report details sales prices at US\$1.42 to the UK£, which was the exchange rate at the end of the auction day. A Buyers Premium and UK Value Added Tax, totaling approximately a combined 24% of the hammer price needs to be added to prices to get their actual cost to the winning bidder. Thus an item that sold*

*for £1,000 would actually cost the buyer approximately £1,240. The \$ cost would be £1,240 multiplied by \$1.42 = \$1,760.80. It is worth noting that the auction took place 11 days before the Brexit vote and that the UK pound exchange rate dropped to \$1.37 the day after the vote was taken.*







With the advent of the Internet and online auctions, traditional auction houses have seen a decline in available items for many of their classes of antiques and collectibles. When the HDS was launched in the early 1990's several auction houses featured diving helmets in their nautical and maritime sales and the results of some of these were featured in early issues of the HDSUSA's *Historical Diver* magazine.

As those houses gradually closed their maritime auctions HDSUSA started to supplement those traditional auctions by reporting on Internet sales to keep members and curators abreast of what helmets in the collectors market were selling for.

These reports also provided an in-print forum for comment and discussion on the helmets and, hopefully, provided a level of accurate information from knowledgeable members which could not be found elsewhere. The Internet provided a market on a truly international scale and the cost of shipping and currency exchange rates came more to the fore than they previously had been.

The Internet worked well for the sale of individual helmets or small collections of a few helmets. Sometimes sections of larger collections, like those of members Carlos Dominquez and Jesse Dean, were also listed over short periods and these too were recorded in this publication.

However, as the divers and collectors who had amassed their collections through the latter half of the last century decided to down size or sell their collections, traditional auction houses seemed to offer a more convenient and easier sales platform.

This was the case when long-time HDS member Tom Hering passed away in 2011, and Larry Lannan at Boston Harbor Auctions was instructed to sell over 25 helmets at auction in April 2014. The auction results were recoded in an article in issue number 80 of the *Journal*. More recently British-based collectors Tony and Yvonne Pardoe also decided to sell their collection via a traditional auction house and instructed near-by auctioneers Bearnese, Hampton, and Littlewood of Exeter, to act on their behalf.





Lot 1. Miller Dunn Style 1  
Divinhood without manufacturer's  
name stamping, £420



Lot 2. Miller Dunn Style 2  
Divinhood with the narrower  
shoulders, communications, and  
stamped B12 on the port frame,  
£1,100



Lot 5. Second style of cast iron  
Sned shallow water helmet with  
cracks in the port lens, £300



Lot 7. The opinions of several  
knowledgeable collectors was  
that this helmet was a locally  
manufactured copy of the third  
style of Sned cast iron shallow  
water helmet, but cast in brass.  
Sned did manufacture a brass  
model of this style of their helmet  
which was marketed through  
the E. J. Willis Company of New  
York, and was sold with a Willis  
plaque attached to the front of the  
breastplate, £1,050



Lot 11. Morse Diving Equipment  
Company Inc. shallow water  
helmet serial number 6409, £880



Lot 22. A Brazilian open helmet  
after the style of Charles Person of  
Sao Paulo. It was stamped "Ford,  
Agencia P. Grossa," £800



Lot 23. A Charles Person, Sao Paulo, Brazil, helmet attached to a half  
suit as shown. This style of dress was used for diamond diving in rivers.  
Photos of it in use can be seen in the book *20,000 Jobs Under the Sea*,  
by Torrance Parker. £600





Lot 26. A Siebe Gorman & Co. Ltd., Admiralty pattern 6-bolt helmet serial number 19,748 (matching) in what appeared to be unused condition, £4,400



Lot 43. A Siebe Gorman & Co. Ltd., Pearler helmet, serial number 13,656 (matching) with a brass breastplate and in very good condition, £5,200



Lot 46. A Siebe Gorman four light, 3-bolt Harbor helmet without tinning and the last style of manufacturer's plaque, £2,000.



Lot 47. A Siebe Gorman & Co. Ltd., 3 bolt lightweight utility diving helmet showing a strong patina and in good condition, £2,500

Tony Pardoe is well known in international circles and had been collecting diving equipment for several decades. He has had a career in the professional diving community and attained the status of a Master Diver. His passion for collecting diving helmets and related equipment peaked when, in 2012, he produced a two-volume, full color, book titled *Diving Helmets and Equipment Throughout the Ages*. Subtitled *A Museum in a Book*, it contained a wide range of photographs of equipment from his collection that were accompanied by paragraphs of text. Selling at around \$450 plus shipping, it found a ready market among collectors who were waiting for

the second edition of Leon Lyon's *Helmets of the Deep*, and was available through the Internet.

The book was to play a central part in the Pardoe collection auction as it was referenced by page number on numerous lots in the auction catalog. The full color, 256-page auction catalog itself sets a very high bar for quality that it would be hard for any future diving equipment auction catalog to reach, let alone surpass. Shepherded by the house's very professional maritime expert Brian Goodison-Blanks, the quality of photography and presentation are outstanding, making the catalog an instant collectible in itself. Several Lots







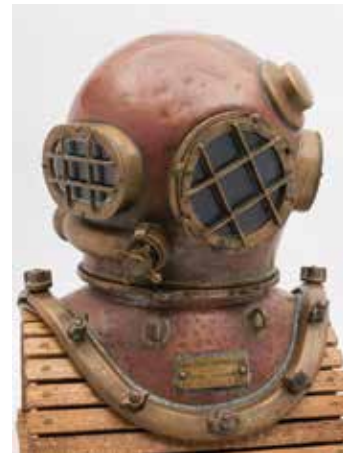
Lot 37. A Siebe Gorman & Co. Ltd., 12-bolt helmet serial number 19,018 (matching). This helmet was of interest to several collectors as the breastplate was made of brass and apparently there is no record of the company making a brass breastplate helmet. As seen, the bonnet is un-tinned and shows no signs of wear, leading to speculation that this may have been a one-of design by the company that was never used. £2,300



Lot 64. An early copper breastplate Pearler helmet with C.E. Heinke Sub Marine Engineer, Gt. Portland Street, London, cast into the front strap. The notes stated that the company operated from this location from 1860 to 1904. Flecks of what looked like white paint were splattered on the crown of the bonnet which did not help its appeal. The air channels were missing and the wing nuts may not have been original to this period of helmet, £6,400



Lot 77. An A. Schrader's Son U.S. Navy Mark V, serial number 798B, dated 10-43, that also drew attention as the breastplate featured not the standard U.S.N. lashing eyes, but weight studs. The complete exhaust, all port guards and spit cock were from reproduction helmets and the inlet elbows at the back of the bonnet looked to be incorrectly located. £2,800



Lot 81. A Morse Diving Equipment Co. Inc., three light commercial helmet with horizontal side ports, serial number 6,605 (matched) and in good condition but with a large rectangular sheet brass company plaque riveted in to the breastplate where the standard helmet plaque would normally be. The breastplate showed the irregular planishing that the company helmets came with during the later period of their manufacturing, £2,700



Lot 60. A C.E. Heinke & Co. Ltd., four light helmet serial number 6534 (matching). This tinned helmet appeared to be unused and was the helmet that was featured on the cover of the auction catalog, £5,000



Lot 71. A DESCO U.S. Navy Mark V serial number 1,280, dated 6-6-44. This D Day Mark V appeared in good condition with minimal signs of wear. The listing did not note if the helmet was matched, £3,600



Lot 73. A non-recessed A. Schrader, New York, with the company name stamped into the outer neck ring of the bonnet. This was a very early helmet with a non-adjustable exhaust located at the rear of the helmet and the bonnet was hand-formed, £1,500



Lot 80. An A.J. Morse & Son Inc., three light Continental helmet serial number 3,362 (matched) in what appeared to be very good original condition, £2,800

had notes written by Tony Pardoe that gave details of the helmets and other items.

The benefit of having access to a copy of the book was that the equipment being auctioned was shown from various angles, whereas the catalog predominately used only a photograph of the front of the item. Apparently not all the books had sold as the catalog stated, *"that a copy of the book is included with the sale of each of the helmets and pumps."* Further, that *"collectors who purchase other items from the collection totaling over £300 in value....have a (free) copy of the book for reference."*

There were three viewing days prior to the auction and Brian and his team had done an excellent job of preparing the vast array of 513 lots, of which approximately 160 were helmets or masks, for inspection. The photographs of the auction room will give you an idea of how well they had condensed the Lots for viewing.

On auction day the room was packed to capacity with numerous HDS UK members in attendance plus collectors, dealers, and historians from Italy, Israel, Germany and the U.S.A. (besides me), and probably elsewhere. Those unable to





Lot 72. An A. Schrader's Son, New York, three light commercial helmet with the company name stamped into the outer neck ring of the bonnet, and that had received some repair work to the breastplate and bonnet. Both had company repair plaques attached to them that stated, "Repaired by A. Schrader's Son Inc., Brooklyn, N.Y. U.S.A. Date." The one on the bonnet was dated 11/18/1 and the one on the breastplate stamped AB 20. The exhaust control was from a later period than when the helmet was manufactured, £1,500



Lot 76. Listed as a 12-bolt/4-bolt A. Schrader's Son Inc., New York, helmet serial number 516, this helmet drew the interest of American collectors as the were questions regarding the style of neck ring. The helmet had no tinning apart from what may have been a small patch on the front of the breastplate directly under the neck ring. On actual physical inspection collectors discovered the patch was of what appeared to be solder and the neck rings were not American, but Scandinavian, with two bolts made of brass and two of stainless steel. The port guard on the top light was also similar to a Scandinavian design and these features were enough to put off some of the potential bidders in the room. £3,900



Lot 79. Listed as a 12-bolt A.J. Morse & Son commercial helmet, this was an authentic Morse bonnet on a Siebe Gorman breastplate, to which a Morse manufacturer's plaque had been attached. A close look at the area around the plaque was enough to alert some people to this. The bonnet had a repair patch at the back where the air elbow inlet was located and the locking pin had been relocated to align it with the gate on the Siebe Gorman breastplate neck ring. None of these features were mentioned in the listing notes. £2,400



Lot 85. An A.J. Morse & Son Inc., one light Harbor helmet in very good condition with only minor wear. The left front strap was a replacement and the three remaining straps were stamped "8," possibly indicating that this was the eighth model of this helmet manufactured. A rare authentic American helmet that was hammered at £2,100

attend the actual auction could watch it live on a link at "the-saleroom.com." Telephone and Internet bidding were also to play a large role in the auction, which was sometimes slowed down by the lag time it took for these bids to reach the auctioneer. It was hoped that the Pardoes would attend the auction to meet the attendees but they did not, apparently due to ill health.

With over 500 lots to get through, experienced auction goers knew that the bidding pace would be very fast. The Lots followed the sequence of the helmets listed in the book. These start with the American shallow water helmets based upon the early Deane "open" style of helmet. This proved be advantageous to some bidders as the majority of the interest, and probably the money, was almost certainly there for the domestic helmets of Heinke and Siebe Gorman, which did not start until Lot 24.

Thus when Lot 1, which was a very clean looking unstamped Miller Dunn style 1 hood, went for a low **£420 there was a look of amazement on several faces.** Before anyone could fully recover Lot 2, which was a similarly clean narrow-shoulder Miller Dunn Divinhood style 2, was hammered at £1,100. Two Miller Dunn Style 3 Divinhood's followed at £2,000 and £1,850 as bidding intensified.

Lot 5 was the second style of the cast iron Snead shallow water helmet. Tony Pardoe's listing notes stated *"Nothing is really known about SNEAD as a company, or if one ever existed,"*

which some collector's viewed as a sign that insufficient research had been done on some of the listings. For many years the Diving Heritage web site has had detailed information on the four different models of shallow water helmets that the Snead company manufactured, and there have been several references published in this *Journal*. It sold for £300.

Lot 7 was listed as a brass shallow water helmet by Snead and several attendees felt that the notes describing it could have been more detailed. This was based upon concerns that the helmet was actually manufactured in Devon, with one knowledgeable dealer stating that these helmets were produced near Seaton, Devon. He further stated that a rough cast Snead helmet had been found in a Devon scrap yard in the 1980's and that it came from a nearby foundry. Credence is given to these opinions on the Diving Heritage web site where the pages on Snead end with a photo of the site's founder, Bert Dodde, holding what he calls a "fishy" brass Snead. Bert notes that when he tried to dive it using an American hose he discovered that the helmet had English, not American threads, and asks visitors to contact the site if they have any information regarding this. The helmet sold for £1,050.

Two highly polished Morse shallow water helmets followed and were both hammered at £880 each before the auctioned moved into a series of six homemade shallow water helmets that ranged from £220 to £480.

The reluctance of the room to pursue anything that was not a domestic helmet was highlighted when two Brazilian shallow water helmets, one stamped "Ford" and the other a Charles Person, complete with its half dress, only reached £800 and £600 respectively, despite being very well photographed in the catalog and available for inspection in the room.

Once the non-domestic helmets were sold the auction room took on a much higher level of intensity as approximately 40 helmets by British manufacturers Siebe Gorman and Heinke were run across the block. These ranged from early non-recessed, stamped-breastplate, models to helmets manufactured during the twilight production years of both companies. Knowledgeable domestic collectors privately expressed concerns over the accuracy of some of the published descriptions of a few of the helmets, two of which were claimed, in a well-circulated email prior to the auction, to have been stolen decades earlier and one of them featured in the first edition of *Helmets of the Deep*.

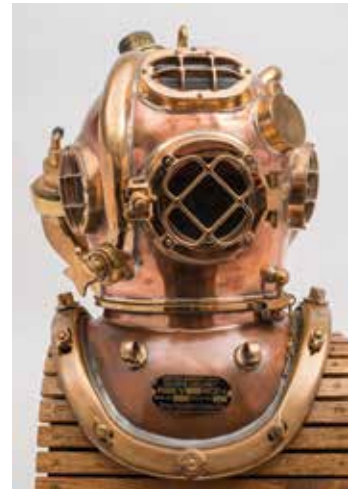
Be that as it may, all Lots were sold, with the highest bid going to Lot 64, which was a 19<sup>th</sup> century copper breastplate Heinke Pearler featuring reinforced straps and an adjustable exhaust valve in the breastplate. This helmet had also appeared in *Helmets of the Deep*. My notes show it was missing its air channels, which was not stated in its description. It sold for £6,400, plus the noted fees.

Twenty American helmets followed the domestics across block and one of them provided the day's highest realized price. Four of these were the venerable U.S. Navy Mark V air models and most of the helmets are shown here. A very recent un-tinned U.S. Navy Mark V helium model by DESCO realized £8,000, which was the day's highest selling item.

Part 2 will appear in the next issue of the *Journal*. 🐙



Lot 86. An A.J. Morse & Son Inc., Fisheries helmet, serial number 5,997 (matching). All four straps were recasts and not original to the helmet, the manufacturer's plaque was riveted to the breastplate, not soldered, and the port lens was not sealed into the port, all of which put off some attendees. However, there was still interest in this helmet as it was almost certainly used in an episode of the television show *Sea Hunt*, which retains a large and loyal group of collectors for any authentic items that were used in that show. £5,600



Lot 87. A DESCO U.S. Navy Mark V Helium helmet serial number 358 (matching), dated 12-01-05. This recently manufactured helmet was un-tinned and appeared in unused condition. It was hammered at £8,000 and was the days highest price lot.

*All individual helmet photos are ©2016 Barnes, Hampton & Littlewood, All Rights Reserved.*

*Auction room interior photos ©2016 Leslie Leaney, All Rights Reserved.*





By Kevin Hardy and Ian Koblick

*In the prior issue of the Journal (number 87), Ryan Spence, Cousteau historian and founder of the Flashback SCUBA Museum in Tacoma, Washington, lead us on a walkthrough of Cousteau's three operational habitats: Conshelf I, II, and III. In this issue, Ryan draws us into the dreams the great French undersea explorer had for furthering man's ability to live and work across the full dimensions of the continental shelf with his imagined undersea habitats, Conshelf IV, V, and VI. Ryan collected these fantastic images and researched the story over the course of many years.*

## Conshelf: The Story of Cousteau and his future vision Continental Shelf Stations IV, V, and VI

By Ryan Spence, Flashback SCUBA Museum

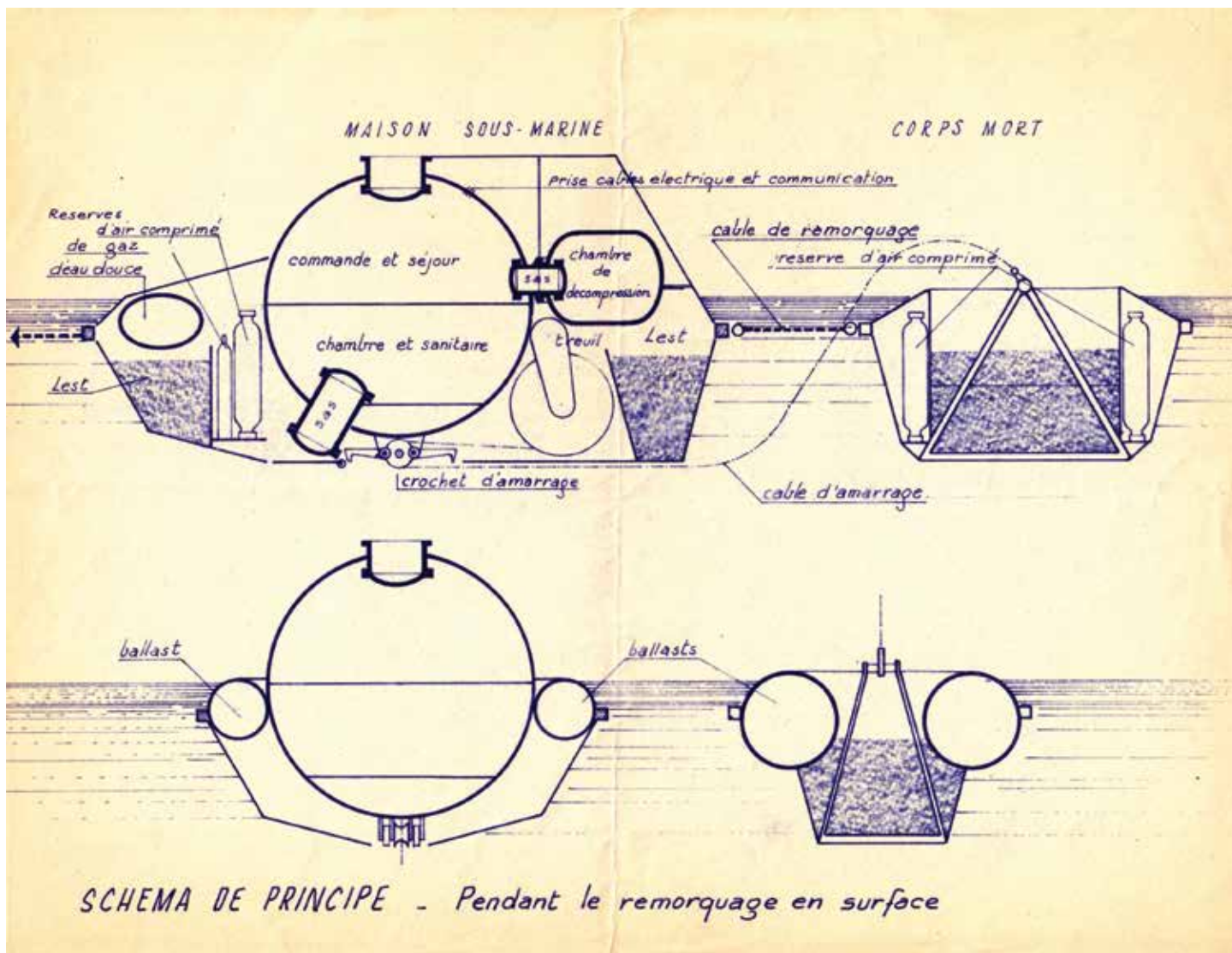
### Conshelf IV

1965 was coming to a close and the successful conclusion of both Conshelf III and SEALAB II seemed indicative of a bright future for deep-sea exploration. Cousteau was developing a series of concept habitats, including Conshelf IV with a goal to house divers at a depth of 650 feet, and Conshelf V with a target depth of 1,000 feet. The U.S. Navy was moving ahead with development of SEALAB III, with Captain Bond assigned to a more advisory role.

Despite the successes of 1965 the landscape of deep-sea exploration was changing. Cousteau was being drawn towards the new frontier of television. Television was ready for Cousteau, but Cousteau was not yet ready to leave deep-sea exploration behind. Commercial sea exploration was looking for increased mobility and autonomy from surface supply ships. Maintaining a physical link to the surface as a means of supplying the habitats with air and power was becoming more and more challenging as the depths of exploration increased. There was pressure from the oil and gas companies to mobilize quickly and efficiently to a variety of locations. Stationary habitats ran contrary to this goal. When you examine the various concept drawings for Conshelf IV you see the emphasis on mobility and efficiency in raising and lowering the habitat. We know that Conshelf IV was slated to use the same steel sphere as Conshelf III.



Figure 1: Concept art for Conshelf IV by Jean-Charles Roux (Copyright O.F.R.S.)



It was designed to be more autonomous and have a significantly greater depth range. Although detailed construction drawings were created the project was never realized and no detailed plans for Conshelf V have been uncovered.

Some have suggested that Cousteau abandoned deep-sea exploration for television and his efforts to promote ocean conservation after the cancellation of Conshelf IV. In fact, Cousteau incorporated Conshelf IV into the pitch for the *Undersea World* series in 1966. You can see Conshelf IV in the storyboard for an episode on the exploration of deep shipwrecks. Design work for Conshelf IV continued until 1970. While Cousteau held onto hopes for Conshelf IV, a lesser-known project was underway.

Figure 2: Section view, Conshelf IV, by Jean-Charles Roux (Copyright O.F.R.S.). Note the tow-line off the bow in the upper image, and the secondary tow line to the ballast frame astern.



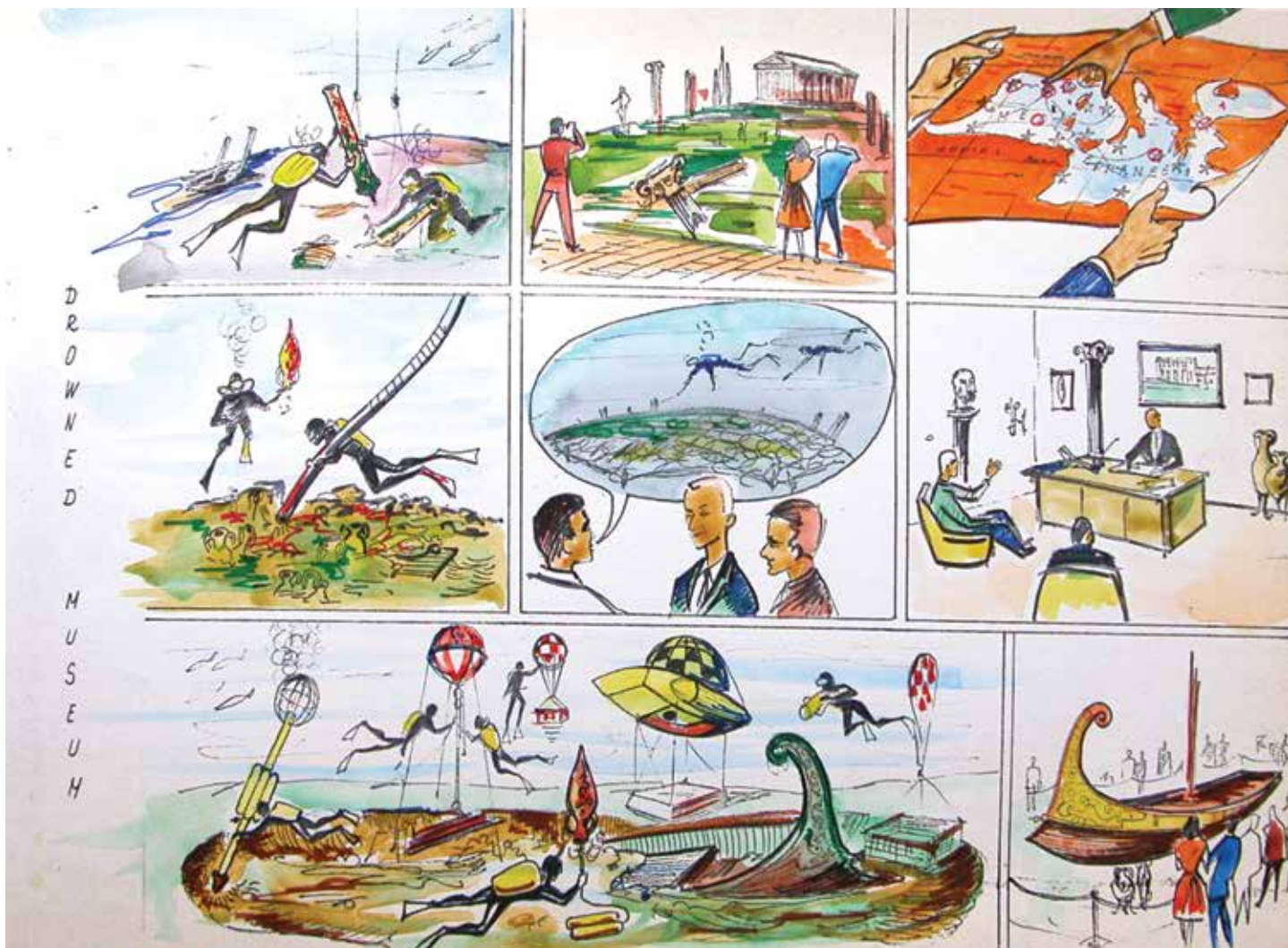


Figure 3: Story board for The Undersea World of Jacques Cousteau depicting Conshelf IV (The Flashback Scuba Collection). Note the image of the Conshelf IV in the lower left panel.

## Argyronete

Cousteau was known to always have multiple projects under development. While the Conshelf projects were underway there were teams of people working on a variety of other projects including the successful submersible program. The *Argyronete* was the result of the marriage of the submersible program to the Conshelf projects. The design addressed the need to have divers in the water, - a shortcoming of the submersible program, and allowed for total autonomy and rapid deployment of an undersea habitat, - a shortcoming of the Conshelf habitats. *Argyronete* was conceived and developed as a submersible that could be deployed as a mobile undersea habitat. The development of *Argyronete* was well underway even before Conshelf III hit the water.

The early designs by Jean-Charles Roux for *Argyronete* were worthy of a vehicle built for futuristic space travel. Ultimately the design evolved into a more pragmatic design that looked much like larger military submarines. The original designs eventually resurfaced as concepts for a smaller *Argyronete II*.

Construction of *Argyronete* was well underway with the pressure hull near completion as the 1970's were ushered in. The success of Cousteau's television series was demanding more of his time. *The Undersea World* series, launched in 1968, was a huge success and the initial demand for twelve shows would grow to an order of 36 by 1976. Ultimately it was the changing financial landscape and not television that would impose the biggest impact on Cousteau's pursuit of deep diving capabilities. The private sector money for deep-sea exploration came largely from oil and gas exploration and was becoming difficult to secure. Funding challenges combined with technical challenges related to propulsion ultimately brought the *Argyronete* to a halt. The completed pressure hull was put into storage and the doors were locked in 1971.

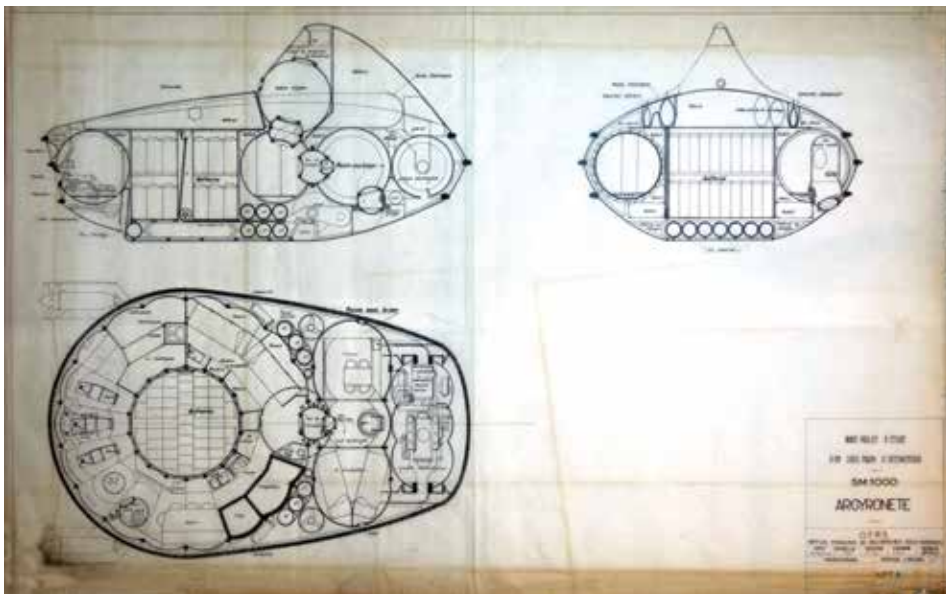


Figure 4: An early design for Argyronete (Copyright O.F.R.S.). One might see some artistic similarity to Cousteau's one-man Sea Flea submersibles (SP500).

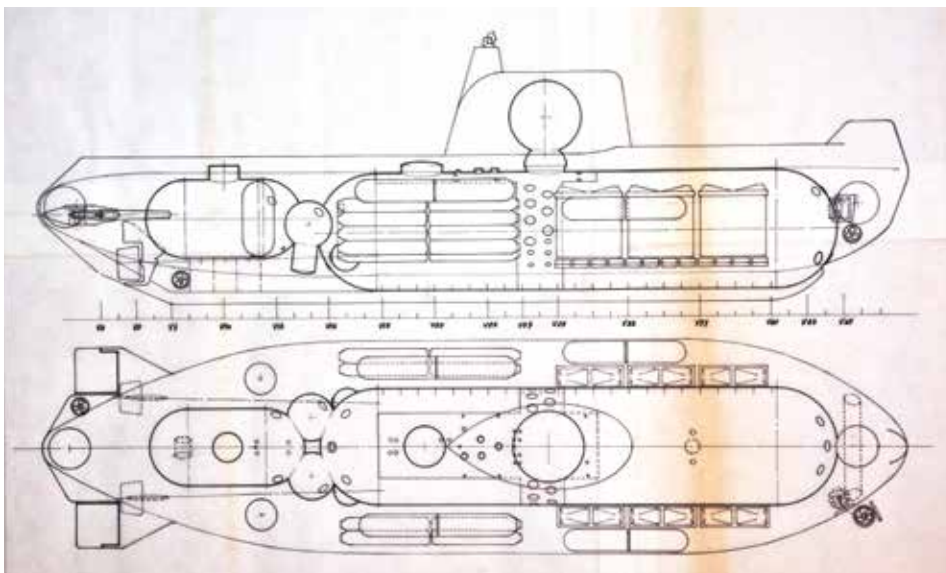


Figure 5: The final design for Argyronete (Copyright O.F.R.S.)

## SAGA

It can be argued that Cousteau's greatest talent was his ability to inspire and recruit extremely talented people to participate in his projects. The list of Cousteau collaborators is remarkable. The resurrection of *Argyronete* was lead by a talented and ambitious diver named Henri Germain Delauze. Delauze had joined the Cousteau team in the 1952. After a relatively short tenure with Cousteau, Delauze left the Cousteau team in 1955. Delauze would go on to become a pioneering force in the diving world, founding COMEX (Compagnie Maritime d'Expertises) in 1961. In 1988 COMEX divers reached an operational depth of 1,742-feet in the Mediterranean and in 1992 they achieved a

remarkable depth of 2,300-feet in a land based pressure chamber. These achievements put COMEX in a unique position to make the most of the advanced capabilities of *Argyronete*.

The resurrection began in 1985. The project, renamed SAGA, was a complicated partnership between COMEX and both the French and Canadian governments. By 1987 the project was nearing completion but both political and technological challenges delayed final sea trials until 1990. SAGA was intended to be the first civilian nuclear powered submarine. Nuclear power was eventually abandoned in favor of Sterling diesel engines. SAGA was capable of working at a depth of 2,000- feet and delivering divers to a depth of 1,500-feet, well within the range of the COMEX divers.

After first sea trials the realities of operating SAGA were running up against declining demand. The end result was SAGA being locked away in a hanger on the outskirts of Marseille, France, which was the same hanger built by Cousteau and his research group. Currently there are efforts to restore the SAGA and make this fascinating piece of history available to the public.

Although the pioneering work of Cousteau and Bond is often overshadowed by the space race of the 1960's they deserve recognition for changing the face of undersea exploration and paving the way for the future of military and commercial diving. The legacy of these two visionaries lives on today.

### About the Author:

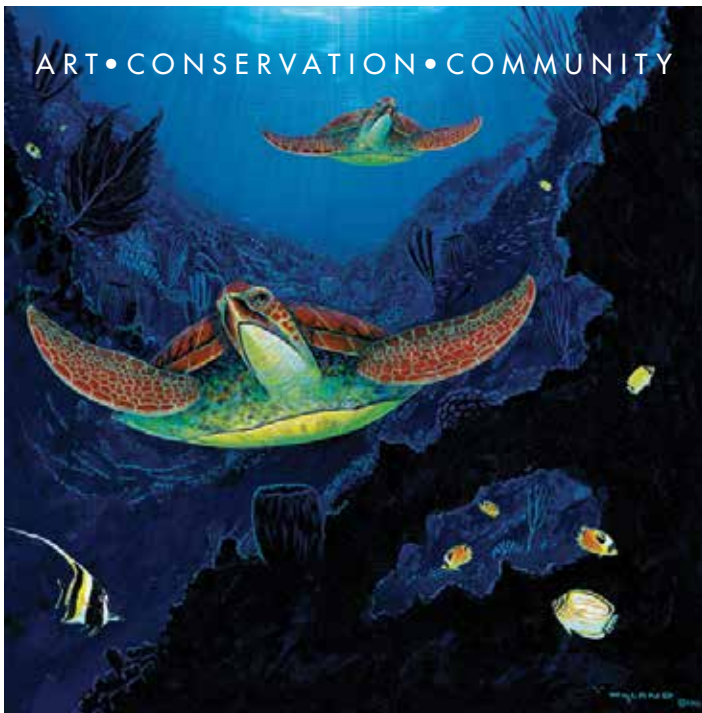
*Ryan Spence lives in Tacoma, Washington, with his wife and son. Ryan operates the Flashback Scuba Museum that is dedicated to the preservation and exhibition of diving history and inspiring the next generation of undersea explorers.*



Figure 6: SAGA in the first trials, 1987 (photo Comex)




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Close up of Sea of Turtles, original oil painting by Wyland © 2011

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Louis Boutan housing, Circa 1900,  
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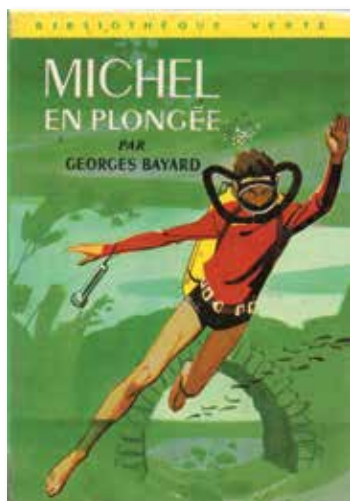
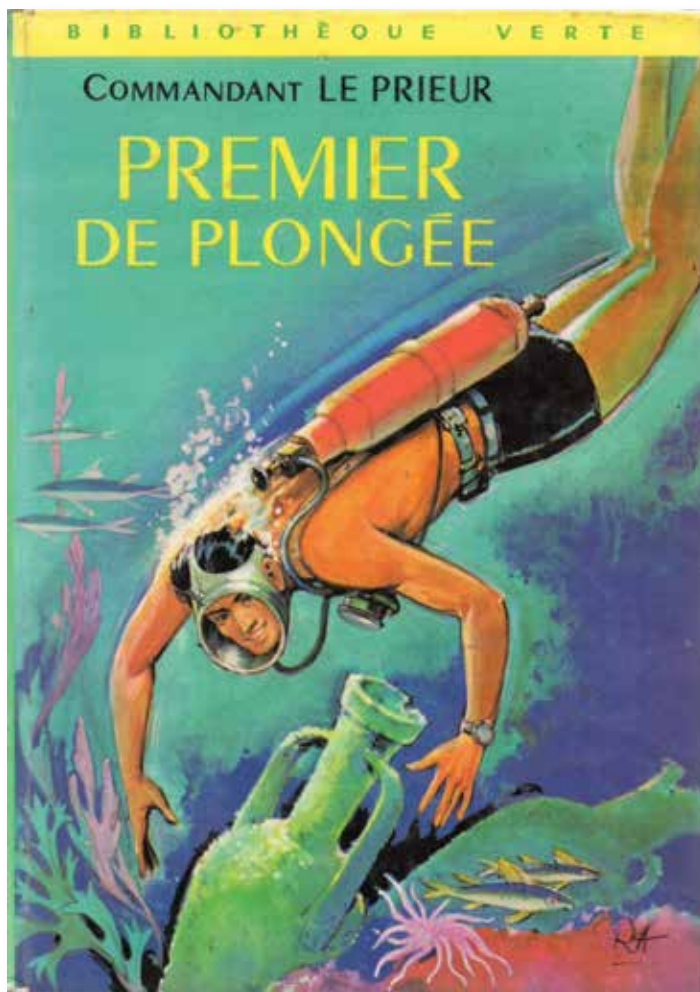
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# The French Collection 3

By Peter Jackson

In this issue of Cover Story I thought I would show some more volumes from our French collection of books for younger readers, some of which will connect to the theme of this year's Conference in Tacoma, Washington. Three are adapted from well-known French diving classics by Verne, Cousteau and Le Prieur, and one is a translation of an English boy's story that we have featured previously. As always, there are many more to follow. I hope you like them. 🐡

PREMIER DE PLONGÉE  
by Commandant Le Prieur  
Librairie Hachette, Paris 1967



MICHEL EN PLONGÉE  
by Georges Bayard  
Librairie Hachette, Paris 1967



20,000 LIEUES SOUS LES MERS  
by Jules Verne  
Bibliothèque Vert – Hachette, Paris 1947



PAR 20 MÈTRES DE FOND  
by Arthur Cathérall  
Éditions, G.P. Paris 1957



LE MOND DU SILENCE  
by Jacques-Yves Cousteau  
Librairie Hachette, Paris 1957



# Camera Man

Stories of My Life and Adventures as an **Underwater Filmmaker**

By Chuck Nicklin

Reviewed by Sid Macken

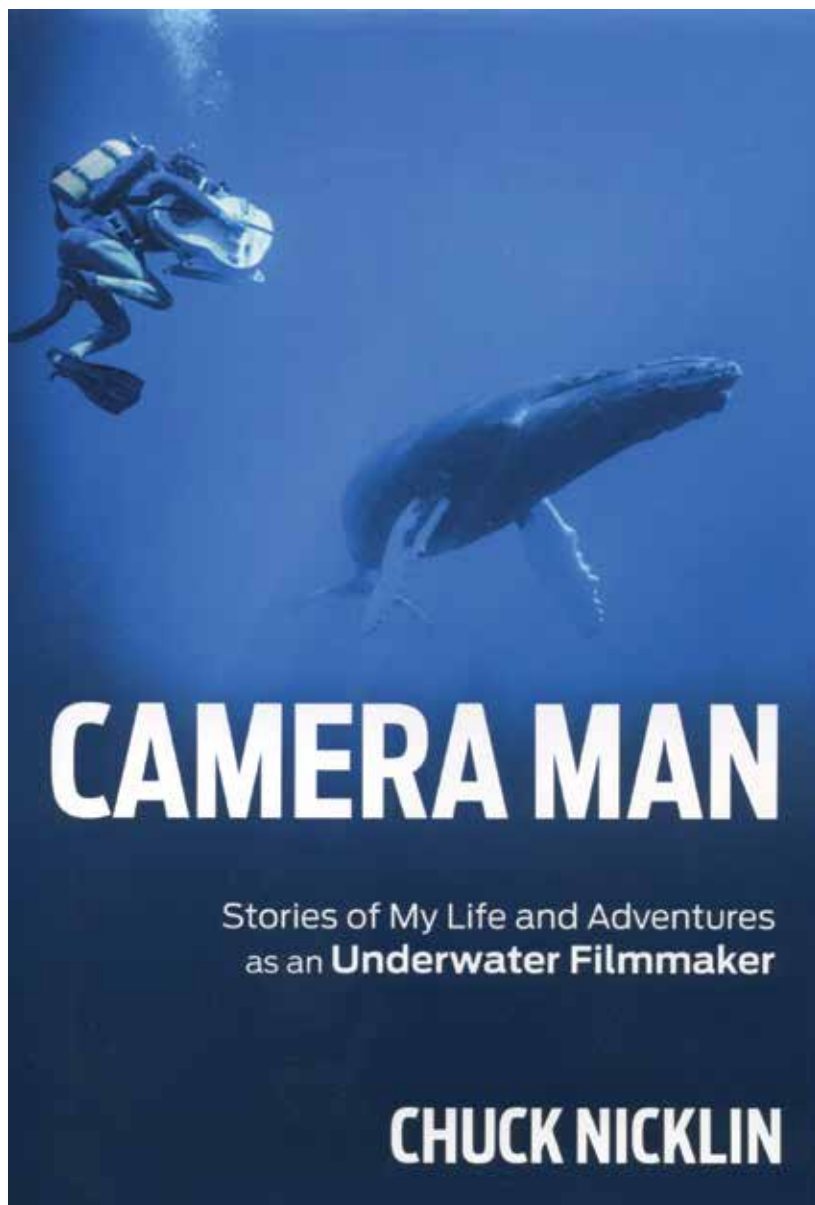
The closing section of Chuck Nicklin's book, *Camera Man*, is devoted to short essays written about Chuck by his friends and colleagues.

The last commentary, written by Bruce Wight, closes with this statement and seems to sum Chuck up very nicely, "You'll not hear Chuck brag about his accomplishments. He'd much rather talk about his future plans than reminisce about the "good old days. This is rare. And, it's why I'm so pleased he's finally written a book."

Chuck Nicklin has lived the glamorous life of a professional underwater filmmaker that many of us have dreamed about. The vision of adventure, traveling the world, diving in exotic locations, photographing exquisite and rare marine life, and rubbing elbows with the elite of the diving world has a strong appeal. Few achieve it. Chuck is one of those few. From a free-diving college student in the 1940's, Chuck's life spun quickly through working in, and then owning, a grocery store, becoming a family man and champion spearfisherman, to owning one of the most famous dive shops in Southern California, The Diving Locker.

He then went on to becoming a master underwater photographer and filmmaker. Along the way he met, worked with, and mentored some of the most famous names in underwater photography, but normally he doesn't talk about all of that. Fortunately for us, in this book he didn't stick with 'normally.'

*Camera Man* describes a life well spent and which, through perseverance and a little luck, evolved from mundane to extraordinary. It's all in your attitude. Chuck takes us through his introduction to diving, the decision to make underwater photography his life's work, and on to the adventures that that decision brought his way. He introduces us to a myriad of lifelong friends and diving companions who shared these adventures.



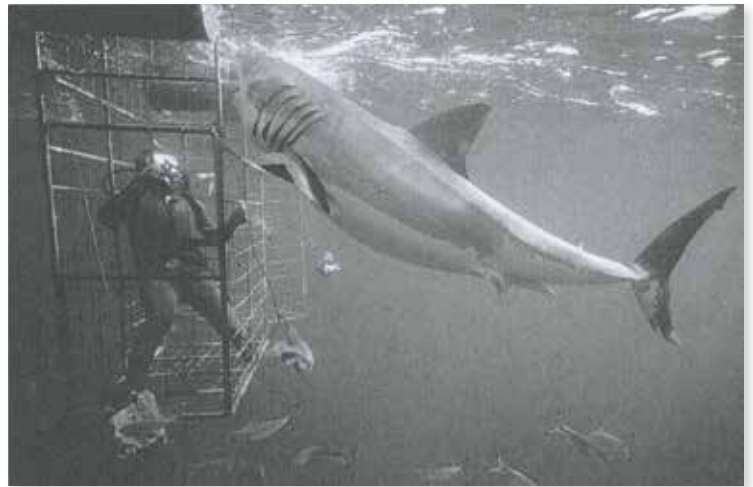
By only browsing the photo section and not reading the text, you can get a good idea of the timber of Chuck's life. There are the traditional family and early childhood photos, but there are also, sharks, beautiful movie stars, submarines, famous scientists, posters from Hollywood films, National Geographic assignments, and friends on diving adventures. And throughout the photos, there is Chuck with a smile on his face looking like he is having the best time of his life.

The text tells us in Chuck's clear, casual, and unassuming manner, the story behind the photos. Through those stories we see that, Yes, the life of a professional underwater photographer can be exciting and filled with adventure. It can be extremely

rewarding both materially and personally. It can also be quite arduous and exacting, full of pitfalls and pratfalls, and well worth the decision to pursue.

Chuck's writing style has a familiarity to it. You could as easily be sitting on the aft deck of a boat and the end of the dive day listening to Chuck tell the story as reading it from this delightful book in your home. In that sense, Chuck takes us along on his adventures. Like Bruce, the diving public and particularly underwater photographers are pleased that he's finally written a book. 🐠

Autographed copies available from the HDS Bookstore online at <http://store.hds.org/collections/books>.



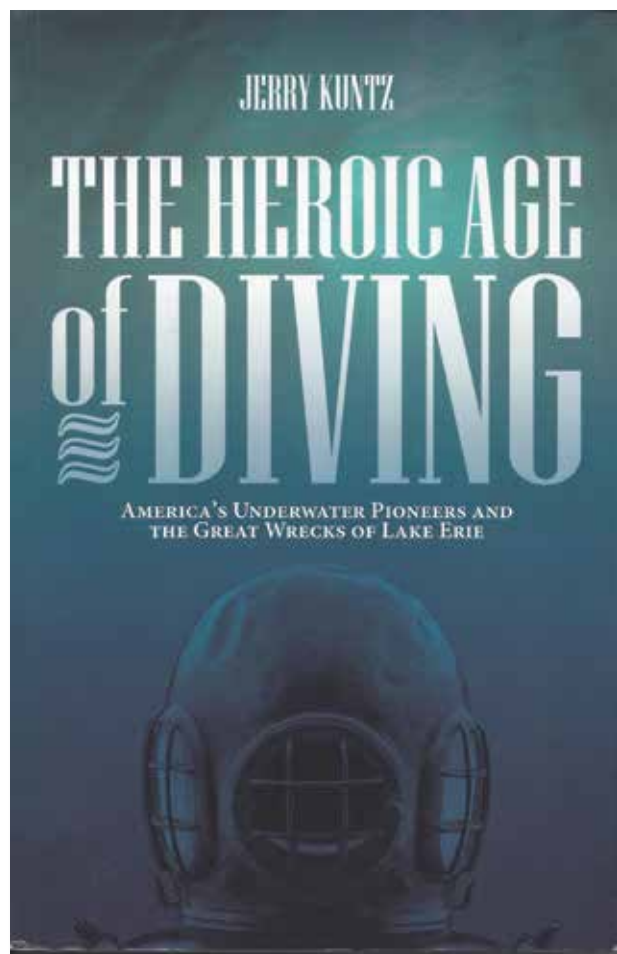


# The Heroic Age of Diving:

America's Underwater Pioneers and the Great Wrecks of Lake Erie

By Jerry Kuntz

Reviewed by Nyle C. Monday



A great deal of diving history has already been written. Much of it deals with its ancient origins, the pioneering work in England, developments outside the U.S., and in the more modern aspects, such as diving in the oil fields or in the various fisheries. Looking at a bookshelf containing many of these books, one can easily see that there is a gap in the literature, that concerning the early history of diving in the United States prior to 1900.

Yet, every subject has its history, and diving is no different. Instinctively we know that something must have existed but we have only bits and pieces to fill in that space of time. Jerry Kuntz's fascinating new book, *The Heroic Age of Diving: America's Underwater Pioneers and the Great Wrecks of Lake Erie*, goes a long way towards filling that gap, and by reading this volume all readers will come away with an even greater appreciation of those who made such great contributions to diving during that era.

It should be noted that although a portion of the subtitle of this book specifically mentions Lake Erie, it does not focus exclusively on this particular lake or even region. The divers who practiced their art in Lake Erie were also experienced in diving in many other parts of the world, taking what they learned in the U.S. out and bringing back what they learned elsewhere to use here. Still, it is fascinating that so many of the early diving experts were from or at least worked in this area.

Kuntz begins his volume with William Hannis Taylor, who he calls the "founding father of American underwater exploration." Taylor's varied career included acting as a privateer for the country that is now known as Argentina, but it was his venture into pearling that would bring his name into prominence. In 1837, he wrote a booklet titled *A New and Alluring Source of Enterprise in the Treasures of the Sea*, in which he refers to the equipment the Deane brothers had adapted to deep sea diving earlier in the decade.

Not long after, he patented a new model of diving equipment utilizing a cylindrical helmet and a suit made of hoops of sheet metal. His New York-based Sub-Marine Armour Company was founded in January 1838. One of his associates was George W. Taylor (no relation), and it was he that would carry on the work when William H. left the stage to work on other projects, only to return to salvage in later years.

It was George W. Taylor who took the new salvage company to the Great Lakes, and the author carefully chronicles several of his adventures (and misadventures), before he ultimately returned to the waters of the Atlantic. Nevertheless, the seeds of diving were sown, and a string of other hardy souls like Elliot Harrington, Martin Quigley, James Whipple, Charles Pratt and John Tope, would carry on where G.W. Taylor began. Kuntz ably recounts the lives and activities of all these men, as well as many others who, through their inventions or business acumen, supported and nurtured their work.



24. Studio portraits of Detroit divers, circa 1875. Preserved as one image, this is actually two separate photographs taken with four sets of diving apparatus. Elliot P. Harrington is fourth from left; his brother-in-law James Phillips is the next figure to the right. The group likely is the Detroit expedition that went to the James River in Virginia in search of the safe of the USS Cumberland. Note the four sets of armor are of different design. [Courtesy Archives & Special Collections, Daniel A. Reed Library, SUNY Fredonia.]



6. James Aldrich Whipple (1826–1861). For a brief time, Whipple was the most famous diver in America. For months, Whipple waited in anticipation of taking over the *Erie* and *Atlantic* diving operations from John B. Green. [Photo courtesy of Alice J. Murphy]



A major portion of this volume is dedicated to the career of John B. Green. Many readers will likely recognize this name as his classic memoir *Diving With & Without Armor: Containing the Submarine Exploits of J.B. Green, the Celebrated Submarine Diver*, first published in 1859, was reprinted in 1990 and is still readily available. While the reprint certainly gives one version of Green's activities, Kuntz uses primary and secondary source material to clarify and, in some instances, correct it. As the reader will learn, Green was a unique character who knew both disaster and success in his lifetime, and it is important the Kuntz has filled in many of the blanks about his activities.



2. "The Steamboat Erie." From an engraving by Huestis & Craft, New York, 1841. The artist likely based this depiction on a copy of the painting of the *Erie* made for her launching, adding flames and figures in distress. [Courtesy New York Historical Society, Maritime History Collection. NYHS Image #44914]

While focusing on the diving and salvage aspects of the era, the reader will also learn a great deal about the "palace steamers." These vessels were a large part of American life in the nineteenth century, and included the *City of Oswego*, the *Atlantic*, the *Erie* and the *G.P. Griffith*. In the early days before a widespread rail system and when roads were still rudimentary, these ships were major conveyors of people and goods from the east coast to the interior of the U.S. The loss of any one of these ships was significant in many ways, and they certainly played a great role in motivating the development of underwater technology and diving. Kuntz details the trial-and-error attempts to reach and salvage such vessels in excellent detail.

*The Heroic Age of Diving* is a wonderful effort in documenting the history of diving in America between 1820 and 1891. The book is primarily focused on the period before the Civil War, but goes on to trace the careers of the major players through the end of that century.

It is hard to believe that Kuntz himself is not a diver or a maritime historian, for he has certainly done his homework and recruited some very knowledgeable sources. In the Acknowledgement page are the names of familiar HDS members and *Journal* contributors such as Leslie Leaney, James Vorosmarti, Leon Lyons and Peter Dick. Unlike many books of this type, it is heavily documented with thirteen pages of notes in the back of the book along with a bibliography. Readers wanting to find out more about the men and events covered in the book will find many good leads there.

Kuntz is to be congratulated for this interesting volume. Hopefully it will serve as a starting point for more research in diving history by himself as well as for others. It is a worthy addition to any diver's library. 📖

Albany, NY: State University of New York Press. 2016.  
ISBN 9781438459622

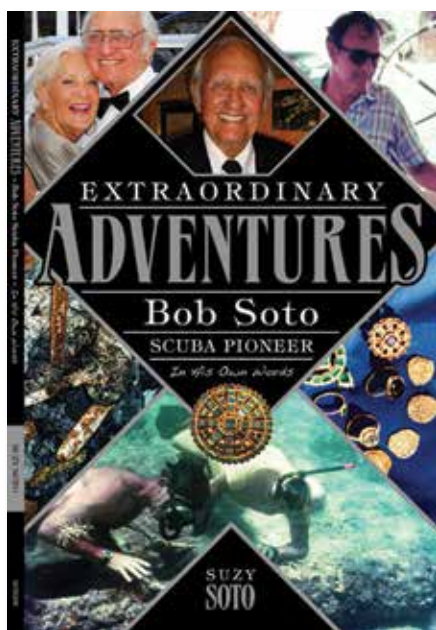


# Extraordinary Adventures.

Bob Soto, Scuba Pioneer, In His Own Words

by Suzy Soto

Reviewed by Carl Roessler



Suzy Soto has written a well-crafted and richly detailed book on the career of her late husband Bob Soto, one of the towering figures in the history of international dive tourism.

The book is written in Bob's voice, making it feel like the reader is spending a long evening with Bob as he spins tales from the days before, and during, the birth of dive travel. Bob describes his early years in the Cayman Islands, which back then had as natural resources the Caribbean Sea and its marine life—no industry, minimal tourism and scant opportunities for employment.

As a result, the Caymans over many decades sent their men to sea, where they served as crew on freighters, tankers, military ships, fishing boats, lobster boats—all to earn wages they could send home. Many of these Caymanian seafarers were lost in hurricanes and shipwrecks, including two of Bob's brothers.

A memorial in Grand Cayman, the creation of which was a personal project by Bob and Suzy, commemorates the loss of 477 of these seafarers.

During World War II, Bob became a Corporal in the Home Guard, and at war's end, he got a job on a U.S. Navy salvage tug as a merchant marine seaman. During those years he studied and became an engineer, and worked his way up to the large oil tankers. This section of the history has Bob on ships in Japan, the Persian Gulf and other ports around the world, and his engineering skills would prove invaluable back in the Caymans.

By 1957 Grand Cayman had three small hotels with a total of 100 rooms.

Bob became a diving instructor and began soliciting diving customers among the hotel guests. There were only a few at first, but his business slowly grew to where he hired another divemaster to help him handle the guests.

This is where the book began to deeply involve this reader—because a few years later I moved my young family to Curacao and Bonaire to host groups of visiting divers. Reading Suzy's book brought back many memories of those early adventures. Our description of our little industry in those days was, "The good news is that we don't have much competition. The bad news is that there aren't many customers."

The Cayman Islands proved to have everything it took to build a tourism powerhouse: an educated populace, crystal clear waters with stunningly dramatic drop-offs, a hotel-building boom and an active tourism development organization. The rest of the history is lovingly recorded here—several boats all running at high occupancy, leading to a prosperous business. A few years into this development, Bob bought one of the first boats to offer live-aboard diving, the *Cayman Diver*. Dewey Bergman, who owned See & Sea Travel in San Francisco, marketed the boat to diving groups with great success. Dewey's company was also the source of all my clients in Curacao and Bonaire, and in the Spring of 1972, he invited me to become his partner in the agency.

I moved to San Francisco in September of '72 and began learning international dive travel. But within weeks, Bob Soto contacted Dewey to say



that Bob's old back injury was acting up and he'd have to stop running the boat. He said it would be for sale shortly.

Dewey and I were rather stunned, because we wanted to use Bob's *Cayman Diver* to convince divers that live-aboards were the future of exotic diving on more remote reefs!

Luck intervened in an amazing way. One of our See & Sea dive escorts, a lawyer from Wichita named Paul Humann, called to tell us he was thinking of leaving the practice of law and going into the diving business. We got Paul on a plane to San Francisco two days later, where we fed him a fabulous Chinese luncheon. The poor man sat like a spectator watching a ping-pong match, his head going back and forth as we peppered him with the glories of moving to the Cayman Islands and buying the *Cayman Diver*.

Paul Humann bought the ship from Bob Soto, and we all had a fabulous eight-year run with the boat running at capacity regularly. Thus, Bob Soto was not only a prime architect of the hotel-based diving tourism industry—he also had a key role in the genesis of the now-colossal live-aboard industry all over the world.

In 1980, Bob sold his business to the indomitable Ron Kipp, while Suzy sold her Tortuga Club. Bob convinced Suzy to buy a failing restaurant, which she did and turned it into the famous Cracked Conch Restaurant, which Suzy solely owned and managed for the next 25 years.

They did add to their adventures to set sail on a 37 foot Schucker sloop year and a half with their beloved Doberman Rambo!



Bob then spent several years hunting for treasure on a series of boats that required a lot of his maintenance skills. Most of us who have been in diving professionally know that the treasure-hunting arena is very tough, with many losses, hot tips that don't pay off and only an occasional profit-making find. Ah, but it is filled with excitement, high hopes and off-the-beaten-path adventures!

I must compliment Suzy on her encyclopedic diaries. As one who has no idea where I went in the early eighties except all over the underwater world, Suzy's ability to tell us who was aboard which boat, in which port, on which day, and what she served them for dinner astonished me. Her matter-of-fact level of detail enriches the book and humanizes it immeasurably.

For those interested in the kind of resourceful, stubborn, talented people who created the dive travel industry, you couldn't find a richer, easy-to-read source. *Extraordinary Adventures*, indeed! A great read! 🐬

<https://www.amazon.com/Extraordinary-Adventures-Paperback-Scuba-Pioneer-Words/dp/0996550135>





# Pacific Northwest Diver Photograph

By Gary Pilecki



*Leiter Hockett*  
**Diver**  
**Submarine Contractor**  
 7203 34th Avenue N.W.  
 Seattle 7, Washington, USA  
 May 31, 1948

A quick search of the Internet showed that W. Leiter Hockett was a shipwright, commercial diver, marine surveyor, and marine contractor from the 1930s to the 1970s. In addition, he wrote a book titled *Water Work, Sixty Years of Boat Building, Commercial Hard Hat Diving, Marine Design and Contracting, Marine Surveying and Related Endeavors*, which was published in 2005. In 2006 Leiter was an attendee at the HDS Conference in Seattle but died one month later, aged 93, in an automobile accident. This exact same photograph is on page 28 of his book. The diver is not Leiter Hockett, but is identified as John Daves, who I believe worked for Mr. Hockett.

As far as the diving helmet goes, it appears to be a 12 bolt Siebe Gorman helmet that was converted to a Pacific Northwest style helmet, with the air feed and communications plumbed into the breastplate. The diver could use the helmet in any position and be more maneuverable. The Society's *Historical Diver Magazine* Number 49, Fall 2006, has an article about the Pacific Northwest Modified Diving Helmets by Sid Macken and Bob Martin as well as a Memorial to the passing of Captain W. Leiter Hockett by his friend Bob Martin. 🐙

Since the Historical Diving Society is having this year's conference in Washington State, I have decided to use a Pacific Northwest diver photograph for this issue. I would label this an advertising

photograph, possibly used in trade related magazines. This paper photograph measures approximately 8 X 10 inches. On the reverse of the photograph is the following:

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Photo: Amanda Nicholls



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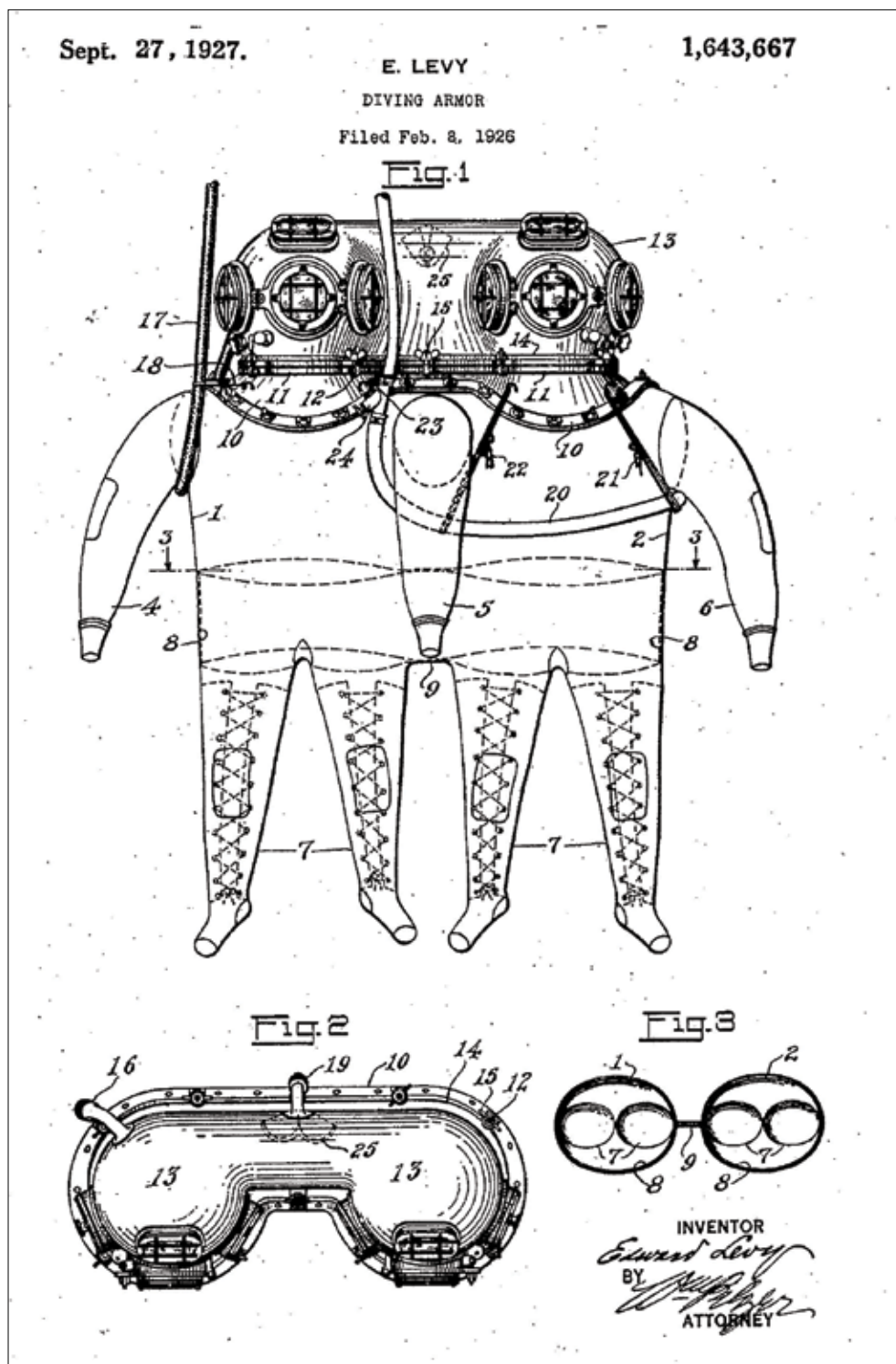
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# Levy's Two-Man Suit

By James Vorosmarti, MD



Edward Levy of New York City applied for this patent on 8 February, 1926 and was awarded patent number 1,643,667 on 27 September, 1927. He gave several reasons for this design: It would provide the advantage of two divers working together to reduce chances of error in observations; It would provide an opportunity for say, an engineer who is not a trained diver to descend with a diver for direct observation of a situation or operation; It would be useful in training other divers in underwater work, and It would be a method of diving lay persons for entertainment.

Figure 1 shows the overall suit. Figure 2 is a top view of the helmet-breastplate assembly, and figure 3 is a cross-section of the suit at the level of the tops of the legs. These figures show that there is nothing complicated with the dress. It is made of the usual materials of the time. What is different is that the suit is a not just two suits joined together, but an open suit designed to hold two persons. In the center of the front top an opening, (23) is provided with a sleeve attached so that one of the divers can put his arm into it. The (8) in the figure indicates a reinforcing band of fabric to guard against ripping the body apart at web (9) due to excessive strain at that point.

The breast plate is made in one piece and extends straight across the shoulders with an indent in the front to allow for free movement of the center arm. The helmet portion is also made as one assembly with the back of the helmet straight.

The front of the helmet is also indented to fit the breastplate. This allows for wider vision for the divers and a wider range of motion of the central arm. The breastplate is similar to others in that it holds lugs to which the helmet is bolted. Air is supplied by one air hose which is carried under the left arm of the left diver and over to a control valve in front of the right diver. This gives the right diver control over the air flow to the helmet and suit. The air flow is split at (19) so flow is equal into both sides of the helmet and suit. He right

side diver also has control of the signal and communications line which comes under his right arm.

There is no mention of the usual boots or of a weight belt. I also note that there are no mittens for the hands. The inventor mentions that either one of the divers could use the middle arm but this would cause problems if the switch from one diver to the other was made underwater.

I have found no information about Mr. Levy or the suit. I doubt if it was ever constructed. In my view it is not a useful

concept. It is bulky and would not lend itself to easily getting around under water. Even the inventor seems to have suspected this as he states in the patent that the usual practice would be that the left sided diver would have his right arm around the other diver to steady themselves and keep in step when walking. Dressing would be difficult and I cannot imagine how the divers could enter or leave the water using ladders. They certainly would have had to use a stage. In closing this appears to be an idea of little or no practical value. 8

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## By Leslie Leaney

A review of recent Internet auction results. While every effort is made to accurately describe the lots, vendor's opinions of what items are, and what their condition is, are not consistent. These results are published in good faith for the interest of our members, and the HDS and JoDH are not responsible for any errors in descriptions, listings, or realized prices. The watch market is a specialized field. Authoritative details of the watches auctioned here is not within the scope of this column and members are encouraged to do their own research into any model they require more information on. Watches are recorded along with the edited description from their auction listing, which may not be totally accurate.



### Blancpain Rose Gold Fifty Fathoms

Pre-owned Blancpain Fifty Fathoms from 2006 in Rose Gold. Watch is in excellent condition—refer to pics for actual condition. All functions work properly. Bezel and Crystal are pristine and unblemished. Includes Travel Case and Pelican Case. 45mm on Tang Buckle in Rose Gold. B/P included. Comes on Brand New OEM Blancpain sail cloth strap. Sold \$11,450



### OMEGA Seamaster Grande/Grand 166.093 Men's Vintage Dive Wristwatch

OMEGA Seamaster "Grande/Grand" Model Number: 166.093, men's vintage dive watch. Case Size: 47.0mm. Thickness: 13.0mm. Material: Stainless Steel. Crystal: Mineral Glass. Water Resistance: 1000 meters. Crown: Authentic: Yes. Crown Function: Screw-lock. Bezel: Authentic: Yes. Material: Stainless Steel. Color: Black. Bezel Function: Uni-directional Rotating. Dial: Authentic: Yes. Display Type: Analog. Main Color: Blue. Luminescent: Yes. Complications: Date. Movement: Type: Automatic. Quick Set: Yes. Bracelet: Authentic: Yes. Material: Stainless Steel. Max Wrist Size: 7.5. inches. Lug Size: 22.0mm. Clasp Type: Deployant Clasp. Clasp Material: Stainless Steel. Accessories Included: Box: No. Papers: No. Manuals: No. Overall Condition: Good. Scratches on case, bezel, and clasp. Watch movement is authentic OMEGA, but is not original to this particular timepiece. Timed to precision on Witschi watch expert timing machine. Running strong and keeping accurate time. Sold \$5,800.

### Rolex Submariner 1680 S/S 40MM Vintage 4.2 Million Dive Watch

A very mint Rolex vintage 1975 circa, 4.2 million series Rolex Submariner 1680 with a most fabulous original patina matte dial and bezel/insert. Very slight engraved back removable confirmed by my watchmaker. Rolex 93150 heavy flip-lock clasp full linked 90% or better. Case is immaculate. Great collectible timepiece for every day wear. Sold \$5,950



### Scubapro Worldwide 500

Vintage SCUBAPRO Worldwide 500 Stainless Steel Swiss Divers/ Dive Wrist Watch in good overall condition (will need servicing/ TLC). CASE & BACK: Large and chunky tonneau-shaped stainless steel case measures 40mm wide across the bezel and 44mm to the crown, 46mm end to end and 15mm thick. The case shows its original sunburst finish on top and has does have nicks and marks from use. Screw in water-resistant caseback shows superficial marks/ scratches and the Scubapro embossed "S" and wording "SCUBAPRO WORLDWIDE" is sharp. The back screws down quite tightly and is corrosion free. There are marks/knicks on some of the screw ratchet prongs from opening case back. All correct Scubapro markings are present inside. DIAL & HANDS: Good condition original matte black dial with green-hued Tritium plots that are all intact...still luminescent but



weak. Original lume-filled hands are fair/good with signs of aging to the hour and minute hands and the orange tone of the sweep seconds hand looks good...overall presentable. CROWN: Original unsigned crown screws down tightly and screws out to the winding, quickset date and non-hacking time-set positions as it should...may need light tweeting/servicing to make it tight (a bit loose when opened).

CRYSTAL: Original high-pressure mineral crystal has minor scratches throughout, but no significant clouding or major impediment for viewing. BEZEL: Original chunky ratcheting unidirectional rotating elapsed time bezel is very tight with good, well defined knurling and moderate wear. The original and rare (most commonly black) silver inlay is clean. Its sunken luminous "12" triangle is intact and has acquired a patina. MOVEMENT: High-grade gilt-finished 17-jewel full rotor automatic Scubapro-signed movement with quickset day. The seconds hand is non-hacking. Keeps good time when running, but reserve has not been gauged (accuracy is NOT guaranteed as watch will need a movement servicing). When not wound, reserve power is a little lacking. Service history is unknown and a movement servicing is recommended/needed due to the watch stopping at times. Sold \$800 on one bid.



## AQUA Lung Vintage U.S. Divers Chronograph

Extremely Rare 1960's Vintage Blancpain associated/developed Aqua Lung for U.S. Divers Company. Fascinating piece of horological history, innovation and beauty. I am a collector and virtually all watches are from my collection. No inferior pieces. All collector investment grade. And watches come with a 1-year written warranty from a vintage specialist in Beverly Hills. Presented is a most rare specimen-one of very few known to exist. Chronograph dive watch produced for U.S. Divers whose dive watches were made by Blancpain thus the names 50 Fathoms and Aqualung. Note: The degree of collaboration on this watch is less known because Blancpain never made a vintage chronograph dive watch, yet this watch still had the Aqualung name and the Schild movement used by Blancpain. Also note the international Japanese dive magazine classifies the watch as a Blancpain and it would be unusual for a specialized dive magazine to be so mistaken. This watch was only made for one year. A collector who is a fanatical collector and diver said it was to be a Blancpain trial model, that if successful in the market Blancpain would make their "own" version the next year, which is consistent with it only produced for one year. In summary this is a gray area. Irrespective, I have sold for \$3k+ a smaller 36mm 50 Fathoms U.S. Divers watch, and obviously if the watch had Blancpain on the dial the price would be out of this world. Only two people have ever recognized this watch: a dive shop owner in Bora Bora and the owner of a dive boat off Catalina. Blancpain vintage Fifty Fathoms and Aqualung had variations made mainly for armed forces around the world but

both models were also made for U.S. Divers. In fact the watch was on the front cover of their 1962 catalog. The company marketed the Fifty Fathoms and Aqualungs with their name on the dial since the 1950's. U.S. Divers has its own cult following of vintage equipment, primarily on the West Coast and Japan. They frequently advertised their watches with Hollywood stars especially if their movie or TV show involved diving. This gem combines the favorite elements of two of my watches-like the Rolex James Bond, no crown guard, and the original dial is jet gloss black and is offset with white and gilt elements. Dimensions 40mm width, 38mm sans crown 48mm lug-to-lug hefty 11mm thick/high black metal rotating bezel that is coin-edge ridged with a thick black ring below the bezel. The chronograph subdials have swirls of concentric circles incised on the dial that reflect clearly in light. The outer dial has all the markers, tracks used in a chronograph dive watch including depth range 0-1000 with a marker for MILE and Km/h. And when resetting the chrono function hand stops perfectly at 12:00. A unique and VERY RARE gem. The watch has a custom vintage crocodile strap with perfect contrast of red and gold metallic stitching which makes the watch pop even more on your wrist. Extra-fine 17 jewels Schild Landeron 248 caliber. Waterproof to 666 feet. Chrono-Matic, automatic and manual wind. Includes catalog pages, ads of this watch. All functions work. The case has some scratching/abrasions consistent with a 50+ year old watch. Movement, watch, case etc. fully serviced by Beverly Hills watchmaker with written 1 year warranty that does not include being waterproof because of rarity and age. Sold \$4,100 on a single bid.



## DOXA Vintage Sub 300 T Shark Hunter

Fine old scuba divers wristwatch made by the Doxa Watch Co. Dial: It has the old original painted dial with white luminous hour markers. The dial is signed and is in excellent condition. The white painted and radium hour and minute hands are in excellent condition. Case: The round stainless steel case is in good condition with normal wear, some light scratches but nothing objectionable. The case measures 43.9 mm in diameter not including the crown. The case is appropriately signed on the inside and outside. Note that this watch comes with the original DOXA stainless steel band which is in very good condition, again, light scratches, very presentable. Movement: This watch has a nickel, 17 jewel automatic movement. Movement is signed DOXA Watch Co. Watch is running but I routinely do not guarantee its accuracy, please figure it will need a complete service to be worn daily. Sold \$1,925 on 33 bids



## Rolex Vintage 1960's Submariner

I bought this Rolex Submariner 5512, serial number 1361530, new in 1969. Several years later, in 1985, I had Rolex New York install a

stainless and 18K gold two-tone bracelet, an 18K gold crown, and an 18K gold bezel with black and gold insert. Soon thereafter, the entire bezel assembly went lost in an aircraft mishap. This iconic Submariner is all original and keeps perfect time. Still very handsome, the watch shows moderate signs of normal use over the past 47 years. Markings between lugs at the 6 o'clock side, in two lines: "STAINLESS STEEL / 1316530" and at the 12 o'clock side, in two lines: "REGISTERED DESIGN / 5512." Markings on bracelet, in three lines: "J7 STEELINOX 78.363.18." The first and last link are marked "78363, and the end pieces "440." Sold \$5,115 on 26 bids.



## Ultramar. Vintage Very Rare Blancpain Fifty Fathoms 1950's

Vintage very rare and never seen Ultramar Blancpain Fifty Fathoms 1950's rotomatic, incabloc, stainless steel, automatic, excellent condition, original box. Case: Original s steel Blancpain Rayville signed. Bezel: Original bi-directional working. Movement: Full service original Blancpain automatic 17 jewels, cal. as 1320. Dial: Original factory Ultramar Blancpain black tone, excellent. Measures: 33mm excluding the crown and 42 mm lugs to lugs. Band: New fine leather strap. Glass: Original Plexiglass. Crown: Original Blancpain s. steel. Comes with original box, no papers. Located in Mexico City, Mexico. Sold \$4,050 on 58 bids





## By Sid Macken

*A review of recent Internet auction results. While every effort is made to accurately describe the lots, vendor's opinions of what items are, and what their condition is, are not consistent. These results are published in good faith for the interest of members, and the HDS and JoDH are not responsible for any errors in*



Anfibian 35mm underwater camera, Italian made, circa 1960. Sold \$769



Anasco AA35 camera in Anasco "100" housing. Sold \$279



Matte finished Calypso (serial #4420). Sold \$420



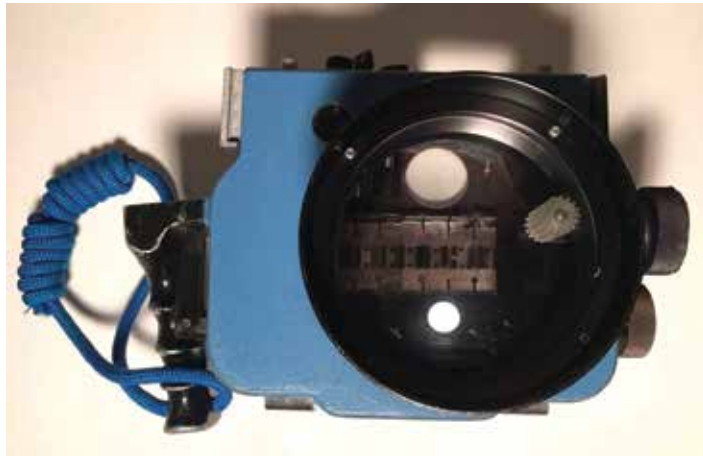
Later, matte finished Calypso camera (serial #5783) with flash and dive accessories. Sold \$1,175



Matte finished Calypso camera (serial #4426) with flash, Sekonic light meter, and accessories, Sold \$1,500



Early glossy paint Calypso camera (serial #2898) with flash, flash bulbs, O-rings, and O-ring grease. Sold \$650



Oceanic Hydro 35 housing with flat and dome ports and extension tubes, some wear marks on edges. Sold \$177



Eumig Nautica Super 8 movie camera, mint condition, in box with all original documents. Sold \$375



Mako-Shark, fixed focus, fixed aperture camera by Jordan Klein. Sold \$158



Oceanic Hydro 35 housing, dome port, heavy wear marks in paint. Sold \$189



By Dimitri Rebikoff, a housing including a Kodak Super 8 movie camera. Sold \$1,286



By Leslie Leaney

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**U.S. Divers Triple Tank System**  
**Vintage Scuba BEAUTIFUL 1975 UDS-1 Diving System US**  
**Divers Aqua Lung triple tank** Excellent cosmetic condition with original box. Possibly never used. This is near new condition. A 9+ out of 10. I think it has been used twice or less, if at all. It is in the original shipping box. And will be shipped in original packaging. One flap is missing. I will tape the box and a new flap. There is one scuffmark on black stripe. Sold \$1,800 Buy It Now plus \$125 shipping from Seattle, Washington.



## Voit Over Pressure Lung Regulator

This regulator was made in the late 1950s. According to one web site that I checked, this is the model used in the old TV show SEA HUNT, with Lloyd Bridges. The regulator is a simple single stage design, which means that it got very difficult to breath from as the tank pressure got low. I put it on a tank with about 1800 PSI and it still works and no leaks were heard. When you look into the inhalation side through the hose attachment tube, there is no corrosion evident. The outside of the can is also very clean. No dents or major scratches. The can has the typical set up with the inhalation side having a satin finish and the exhalation side having a polished chrome finish. Originally, it would have had green hoses, a green mouthpiece and green metal hose clamps. The mouthpiece is the correct style, but not the right color. The serial number is 7673 which I would guess is fairly low. The exhalation valve in the can is shot and the wagon wheel one-way valve holders and the valves in the mouthpiece are missing. The two smaller hose clamps have the Voit logo, but the large hose clamps do not. The dust cap is missing, but there are two of the thick O-rings that were used back then. They are rather hard and probably would not make a good seal. Sold \$355 on 23 bids.



## Mermaids of Tiburon original lobby card set

This is an original 11X14 set of 8 lobby cards from the film "The Mermaids of Tiburon" released in 1962. This set was sent to theatres to be displayed in the lobby to promote the film's engagement. This set has a tiny bit of wear (see scan), but otherwise is in excellent condition. Sold \$400.







### Scott Hydro Pak Set

**Vintage very rare 1950's Scott Hydro Pak set** made by Scott Aviation Corporation Lancaster New York U.S.A. I haven't seen a complete set on eBay in years. These are getting harder and harder to find complete. I have seen them sell for up to two grand. The tanks and back paks are almost impossible to find. The masks show up now and then. Most times missing the first stage. A mask sold a few days ago with no first stage for \$155. This is a matching set the first stage and back pak have the same serial numbers. Comes with original tags with same numbers. Original manual and tag from original first owner. Comes with a tank boot. Scott never had them t- he first owner put in on. The serial numbers are #1910 tanks first date is 12-54 last hydro is 3-68. Tank is 2150 psi. I am selling this because I have another single set along with a rare navy double set. Someone else can enjoy this for a vintage collection or to get serviced and use for vintage diving. Items are in used very good condition. Tank has some light printing wear on one side. Has name in light marker written on it by first owner. Back pak has some paint scratches on both sides. Mask rubber is very good. No cuts, tears, dry rot etc. Soft and flexible. Needs a little cleaning. Cloth harness looks complete in very good condition. Manual and tags in fair shape. Mask strap is in very good condition no broken tabs etc. First stage looks like new. Mask and first stage and paper items will be mailed in a large priority box. Tank and back pak will be mailed Fed X ground. Sold \$400 on one bid.



### U.S. Divers Aqualung Mistral Regulator

**Vintage original US Divers Aqualung Mistral double hose scuba diving regulator.** I purchased this from a good friend who called it the "perfect mistral." I used it only for display in my personal collection. It appears never to have been taken apart and it appears to be to have never been used. All rubber is soft and pliable there is zero cracking. Comes with original Aqualung box. Display stand is not included and is shown in the listing for display purposes only. Sold \$475 Buy It Now.



### Vintage Depth Gauge

Vintage Depth Gauge. Goes to a depth of 80ft. Still in perfect condition. - That was all in information posted by the seller Dave in Barnesville, Ohio. Sold \$201 on 19 bids.





**Skin Diver Magazine complete years 1961, 1962, 1963.** Skin Diver magazine 1961, 1962, 1963 full year+ Aug 1964. A magazine for skin divers and underwater spearfishermen. Item came from an estate and has some wear, yellowing from age, and normal wear. Overall in good condition for there age. Has a musty smell from being stores in a basement. Please ask any questions that you have about the item that you are interested in. I am happy to do all I can to make sure you understand the item and it's condition. Sold \$145.



## Voit Skin Diving Instruction LP

Beautiful vintage translucent blue LP skin diving instruction record featuring VOIT equipment. VOIT, as you know, was a well-known maker of double hose and other scuba gear and supplied equipment for the famous "Sea Hunt" TV series! This is a very unusual item and appears to have hardly been used. Record looks nice and comes complete with the jacket and booklet as shown. A great item for the vintage diving enthusiast! Sold \$100 on one bid.



## US Vietnam Era Nonmagnetic IMPERIAL UDT dive knife

Contract date of 1961 nonmagnetic dive knife made by Imperial. These knives are serial numbered and this one is # 297 of the 1156 made. One of these knives is pictured in Mike Silvey's book about Vietnam era knives on page 116. Further information about this knife is available in Frank Traska's article in Knife World August 2000 issue and Silvey's article about them in Knife World August 1995.... both reprinted in " Military Knives ... A reference book " by Knife World in 2001, pages 169 thru 177. It's interesting to note that Silvey points out the cost of this knife was \$99.67 per knife ... more than the cost of a M-16 rifle at the time. This knife is in excellent condition with the original factory edge present on the blade. The Greek letter Mu (the Greek symbol is used in physics to denote magnetic permeability) with an L thru it on both the scabbard and the handle and the date 6-78 indicate the last test of magnetic permeability done on the knife. The blade material is Haynes Alloy No. 25 with a Rockwell hardness of 50. It is 7-3/8 " double ground (double edged) with nine saw teeth per inch (52 total) across the top edge). Here's an opportunity to own a very rare knife. Sold \$1,500.



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# HISTORICAL DIVING SOCIETY USA QUARTERLY REPORT

[www.hds.org](http://www.hds.org)

By Sid Macken, President



L-R, Lee Selisky, Dan Orr, Sid Macken, and Leslie Leaney at the HDS booth, Long Beach Scuba Show

## Long Beach Scuba Show

The Long Beach Scuba Show is fast becoming one of the larger consumer dive shows and the HDS is pleased to be able to be part of it. This year's booth volunteers included HDS member Larry Breazeale, past President Lee Selisky, and an unwitting passerby from Oregon, Ron Brockelman. Many thanks to our volunteers and to our friends who stopped by the booth to visit.

## 2017 Awards

Elsewhere in this issue, we have announced the HDS awards for 2017. These awards have been established to provide recognition to people or organizations who have made significant contributions to the mission of the HDS, the promotion of diving history, or the diving industry as a whole. The HDS is proud to be able to honor these contributions made to diving and to the Society.



Stillson Concept Helmet Grand Prize



Greg Gorga pulls the winning helmet ticket while Dan Vasey assists.

## Raffle

On August 27th, HDS Director Dan Vasey, Santa Barbara Maritime Museum Executive Director Greg Gorga, and Santa Barbara City College Marine Diving Technology Professor Don Barthelmess met at the Santa Barbara Maritime Museum to conduct the 2016 raffle. Congratulations to the winners and thanks to all who participated in the raffle. Your support helps the HDS to continue its mission of preserving diving history. The winning tickets are:

1. Stillson Concept Helmet - John Mahoney
2. *Deep Diving and Submarine Operations* - Alex Rose
3. Stan Waterman 10 Vol. DVD set - Norman Deatherage
4. *Camera Man* - Jeb Schieile
5. HDS Fleece Pullover - Ken Wood
6. HDS Denim Shirt - Monte Rook
7. Diving in Deep Water T-Shirt - Patty Ward and Pat Casey
8. Preservation T-Shirt - Glen Egstrom and Robert Warnick

## Conference

Next year the Society will celebrate its 25th Anniversary. In the post-financial crisis period where diving industry companies and publications have gone out of business, the non-profit HDS has stayed viable thanks to the support of our members, donors, sponsors and volunteers. To celebrate our 25th anniversary the HDS will return to its roots in Santa Barbara, California, where it was launched on October 18, 1992. Since that time the Society has traveled an interesting and challenging road and been a beneficiary of good fortune as well as the victim of bad. Throughout these years the HDS has always managed to publish and grow our prime membership benefit, the *Journal of Diving History*. It is now believed to be in the top echelon of successful American diving magazines that are still published.

Society Co-Founder Leslie Leaney has volunteered to be the 2017 Conference organizer and has already confirmed the Santa Barbara Maritime Museum as one of the host facilities for the Conference weekend. All details will be announced through the HDS website and our social media. The dates are September 15 - 16, 2017, so mark your calendar. Santa Barbara Maritime Museum boasts one of the most significant displays of diving equipment of any American museum and is also part of the harbor community where the trades of professional diving are still operational. The Santa Barbara City College Marine Technology Diving Program remains a cornerstone of the diving community and several of the pioneers of commercial oil field diving are still involved with College, Museum and diving community. It promises to be a memorable conference and reunion and I hope all members can attend. I will post more information as it becomes available.

## Website

We have had a few issues with the HDS website recently. Some of you may have discovered this if you tried to access [www.hds.org](http://www.hds.org). Our webmaster, James Forte, has been working on getting everything back up and running properly. Your membership and shopping information are safe as those operations are conducted on separate websites.

## DEMA

The DEMA Show is coming up soon in Las Vegas, November 16-19. The HDS will be at booth number 1254, so be sure to stop by and visit. Las Vegas is always a good show in the convention hall or the casinos.

Historically yours,



# Bob Cranston

## Underwater Cameraman

1930 – 2016

By Howard Hall



*On June 2, 2016, underwater cameraman Bob Cranston passed away at his home from cancer. Howard Hall, one of Bob's best friends, wrote the following memorial story to share with the underwater community.*

Howard Hall and Bob Cranston



Bob Cranston with an underwater IMAX 3D camera during the making of *Deep Sea 3D*

Bob Cranston and I looked over the side and watched as bits of kelp and other detritus drifted by the hull of the *M/V Conception*. It was the winter of 1993 and the weather was clear and calm at Catalina Island. But there was some current running through our dive site.

"Do you think we can do this?" I asked Bob.

Bob laughed and said, "Yeah, I think it's doable." When conditions were questionable, I always asked Bob's advice. To say that I valued his judgment and opinion is simple understatement. But Bob never said "No." When a questionable dive looked possible to him, he would say that he thinks it's doable. Sometimes though, he would just laugh and say nothing. I learned to interpret this as "No" or even as, "Are you out of your mind?" But he never said, "No." He was simply incapable of having a negative opinion. On this crisp California morning, I took Bob's advice and we prepared to dive.

Our crew began hoisting the 1,200-pound IMAX 3D housing over the side of the boat. The 65-pound tripod was already hanging thirty feet below on a down-line. Mark Thurlow would follow Bob and me and bring the tripod down on a lift bag. Mark Conlin would bring the 220-volt surface-powered cable lights.

As we neared the bottom at 70 feet, I watched the sand racing by and realized there was much more current on the bottom than on the surface. I looked at Bob and saw that his mask was leaking. He was laughing, which caused water to seep in around his eyes. Thurlow raced ahead of us and crash-landed the tripod in the sand deploying the legs as quickly as possible. Then Bob and I swooped down on the tripod with the huge camera

and struggled to insert the camera's mounting plate into the tripod lock. Conlin fought to mount the lights. Amazingly, we managed to accomplish all this. But as soon as everything was assembled, the up-current leg of the heavy tripod began to lift. We couldn't stop it. The 1,200-pound camera toppled over and soon the whole mess was rolling across the bottom in a tornado of sand and a bird's nest of light cable. I looked at Bob and drew a hand across my throat to signal "abort." Bob's mask was now half full of water.

Soon we reached the end of the light cables, but Thurlow had managed to dismount them and the lamp heads drifted away behind us. Conlin, who was a bit freaked out, ascended holding on to the cables. Bob and I struggled to dismount the camera from the tripod. This was difficult as the whole heavy mess rolled across the bottom. But soon Mark had the tripod hanging from the lift bag. Then Bob and I began ascending with the camera.

That evening, Bob, I, and the rest of our crew shared a beer on the sundeck of *Conception*. Each told his version of the story. We laughed until our throats hurt. It is moments like this that I will miss most, now that my friend is gone. Bob and I have shared hundreds of such moments, perhaps thousands. He had the most genuine smile I have ever known.

The IMAX film we were making became "Into the Deep," the first underwater IMAX 3D film ever made. Bob helped design the massive IMAX 3D underwater housing. He designed and supervised the building of the underwater tripod. And he supervised the development of our cable movie light system. If I hadn't known that I could rely upon Bob to accomplish the unlikely, or even the impossible, I doubt I would ever have had the courage to take the contract to make that first IMAX film.

During the last thirty years, Bob and I made four other IMAX films together. Bob went on to become Director of Underwater Cinematography on many other television and IMAX productions including "Into the Arctic" where Bob captured incredible images beneath Arctic ice and of polar bears swimming underwater.



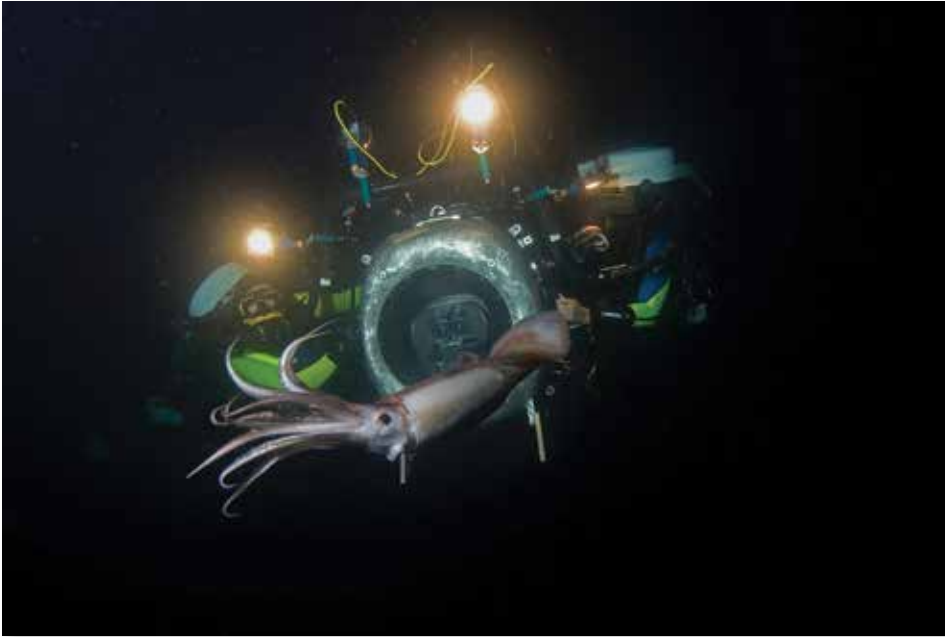
Bob Cranston during making of *Deep Sea 3D* in British Columbia



Howard Hall and crew with IMAX 3D camera during making of *Deep Sea 3D* in Hawaii







Bob Cranston with an underwater IMAX 3D camera during the making of *Deep Sea 3D*



Photos courtesy of ©Howard Hall Productions, Kevin McDonnell, Peter Kragh, and Michele Hall.

Bob and I shared more than 2,000 hours underwater on rebreathers. In 1990, I had the idea that we might capture amazing hammerhead shark behavior if we could use rebreathers to get beneath the schools in the Sea of Cortez. At that time, essentially the only closed-circuit rebreathers in existence were military Mark 15 rebreathers. These were not available to civilians. Bob made it happen anyway. We trained ourselves to dive these contraptions, and the extraordinary hammerhead footage we captured became the heart of a television film called "Shadows in a Desert Sea." Afterwards, rebreathers became a fundamental tool for making our underwater films. Bob made all that happen.

Bob and I made dozens of television films together. In 1987, he quit his job at Diving Unlimited International to collaborate on our first PBS Nature episode, "Seasons of the Sea." We used his boat, the *Betsy M*, to spend 130 days filming marine life in Southern California. I never had so much fun. I could not have made that film, so many films, without Bob.

As I write this, I am inevitably reminded of how closely our lives were intertwined. So many adventures together, so much of my history as a diver, so much of my love for the ocean, so much of my success as a filmmaker, was influenced dramatically by my relationship with Bob Cranston. The realization overwhelms me. I might never have made any of these films had I not known Bob. How different my life would be. How diminished. I know I will never make another dive without thinking of him, without feeling him beside me.

I miss my friend. - **Howard Hall**



# Bob Campbell

1930 – 2016

British Sub Aqua Club National Equipment Officer and  
HDS demand valve specialist



Sadly, following a short illness Bob Campbell passed away on the 18th May 2016. Born in Ilford in 1930, Bob and his mother moved to Swanage when he was four to live with his grandparents. His grandfather was a fisherman and, as with many previous family members, coxswain of the Swanage lifeboat. In later years Bob took great pleasure showing a photograph of his grandfather with the rest of the lifeboat crew. As a child, Bob's own responsibility was collecting driftwood from the beach for firewood. It was a task he was to continue for the rest of his life and it paid dividends, as he found at least one casing from an early scuba regulator in the sand.

During the World War II years the family remained at the family home in West Drive, Swanage, and Bob begun building model airplanes, an interest that eventually led to him qualifying as a solo glider pilot in his late teens.

His National Service was in the Royal Navy as a Sub-Lieutenant, but he left due to serious health issues, and later became a qualified Chartered Engineer. Apart from a period working in Air Crash Investigation, his entire career then centered on flight refueling.

Bob took up sports diving in the 1950's and eventually became the British Sub-Aqua Club's National Equipment Officer, as well as a regular contributor to diving magazines and diving manuals produced by the British Sub Aqua Club.

(BSAC) He acquired a boat which was used both for diving expeditions and family excursions around Swanage Bay. It was during this period that he first began servicing diving equipment from a base on Swanage pier, originally for Wright Brothers, and later for the Divers Down company.

His thirst for knowledge knew no bounds and he was never happier than when he was taking things apart to see how they worked, possibly making improvements, and then reassembling them. Here his engineering expertise came to the fore, allowing him for instance to spot the subtle differences in what to an untrained eye would appear to be two identical 'regulators.' As Bob pointed out, the term regulator only came into use in Britain from the USA in the early 1960s. Prior to its introduction they were known as 'demand valves.' This is how Bob always referred to them and, in deference to his memory, we shall continue to do so here.

The result of Bob's expanding interest were not only copious notes, but also his own working drawings of demand valves in what was a rapidly growing collection.

In turn this resulted in a number of articles in which he analyzed the workings of various demand valve designs. Bob did this in a way that not only highlighted his professional engineering expertise but found widespread appeal when they appeared in the pages of HDS publications worldwide. These articles earned Bob a high reputation within the international historical diving fraternity.

Instruction manuals for demand valves only go so far, and Bob's written contributions added an extra technical layer of information that has helped expand and maintain an international interest in this critical component of diving equipment. These well-researched articles will form part of Bob's legacy.

That legacy of course also includes his original working drawings, which were based on measurements and he made while dismantling the originals. His observations, couched in professional engineering terminology, were, and still are, a pleasure to read. The immediate result of course, is a large collection that will now require indexing and long-term preservation.

One way in which Bob passed on his acquired expertise towards the end of his life, was by way of weekend workshops held in his

collection room on Swanage Pier. These covered the practicalities of restoration of the demand valves, typically manufactured by Heinke, Siebe Gorman or Submarine Products. Given his age, the input on his part for those was considerable, as each valve had to be prepared for ease of disassembly and reassembly during his demonstrations. Consequently, as Bob's ill health finally intervened, so the workshops were discontinued.

Most of the HDS only knew Bob later in his life and by way of his interest in diving. His on-going interests were in fact far more wide ranging and included speed records on land, sea and in the air, with a special interest it seems in Formula races: a telephone caller who interrupted him watching one race on TV was politely asked to call back. Those interests extended to history generally, with him making a number of visits to Malta to inspect the extensive fortifications built by the Grand Knights some hundreds of years ago. They also included the American Civil War and early submarines, with him being able to place Simon Lake's diver 'lock-out' system in its proper historical context. Bob's niece describes her memories of him as being a cross between Jacques Cousteau and Barnes-Wallace: - a wonderful analogy and totally fitting.

After Bob Campbell's mother died, he lived on at West Drive alone. Despite the medical conditions that affected his adult life, he remained friendly, happy and always full of hope. In particular he cherished his friendships, for which Nicky his niece describes him as one of a kind.

Bob Campbell will sadly be missed, as will his knowledge and advice in the historical diving world. Many HDS members will miss his regular chats over the telephone and he contributed much our knowledge of diving history and working equipment, even though he did own a computer and insisted on hand typing everything. He will be a hard act to follow, though one doubts if any of us will ever quite have his depth of understanding and knowledge of the subject.

– Phil Thurtle

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A PUBLIC BENEFIT NONPROFIT CORPORATION

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## INSTITUTIONAL HISTORY

### The Historical Diving Society USA

A California 501 (c) 3, Educational Non-Profit Corporation.  
Founded 1992, Santa Barbara, California.

#### Founders

Skip Dunham and Leslie Leaney

#### Founding Directors and Officers

Leslie Leaney, *President*; Skip Dunham, *Vice President*;  
Steve Chaparro, *Secretary*; A.L. "Scrap" Lundy, *Treasurer*;  
Lisa Glen Ryan, *Director*; Ron Karlsson, *Director*;  
Torrance Parker, *Director*; Mike Von Alvensleben, *Director*.

#### Remembered for their service as Directors of the Society

Captain Paul Linaweaver Jr. M. D., USN (Rtd.) (1929 – 2015)  
*Director* 1995 – 1996, 1999, *Chairman* 1997 – 1998

Robert "Bob" Christensen (1928 – 2013)  
*Director* 1997 – 2000

Nick Icorn (1929 – 2013)  
*Director* 1996 – 1999

Kent "Rocky" Rockwell (1949 – 2012)  
*Director* 1999 – 2003, *President* 2003

#### Remembered for their service as Advisory Board Members

Dick Bonin (1930 – 2015)

Scott Carpenter (1925 – 2013)

E.R. Cross (1913 – 2000)

Henri Delauze, *France* (1929 – 2012)

Bernard Eaton, *England* (1926 – 2012)

Andre Galerne, *France* (1926 – 2008)

Lotte Hass, *Austria* (1928 – 2015)

Professor Hans Hass, *Austria* (1919 – 2013)

Dr. Christian J. Lambertsen (1917 – 2011)

Jack Lavanchy, *Switzerland* (1928 – 2015)

Billy Meistrell (1928 – 2006)

Bob Meistrell (1928 – 2013)

Surgeon Vice-Admiral Sir John Rawlins, KBE, FRCP, FFCM,  
FRAES, *England* (1922 – 2011)

Andreas B. Rechnitzer Ph.D. (1924 – 2005)

Ron Taylor, *Australia* (1934 – 2012)

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Technology Department, *California*

#### Official Society Museum

The Santa Barbara Maritime Museum

## HDS AWARDS

### The Historical Diving Society Hans Hass "Diving To Adventure Award"

The Award is established in two categories: Arts and Literature in recognition of Professor Hass' pioneering work in both underwater imagery and printed word, and Science and Technology in recognition of Professor Hass' pioneering work in marine sciences and underwater technical innovation.

#### Recipients:

2016: Howard and Michele Hall, *USA*

2014: Professor Weicheng Cui and the Chinese  
State Oceanographic Administration,  
*Peoples Republic of China*

2013: Laurent Ballesta, *France*

2011-12: *Not Awarded*

2010: Dr. Sylvia Earle, *USA*

2008-9: *Not Awarded*

2007: Bev Morgan, *USA*

2006: Stanton Waterman, *USA*

2005: Daniel Mercier, *France*

2004: James Cameron, *Canada*

2003: Ernie Brooks II, *USA*

### The Historical Diving Society Diving Pioneer Award

The Award recognizes the career achievements of individuals for their life-long contributions to the field of diving and underwater arts, science, and technology.

#### Recipients:

2016 Jack Lavanchy, *Switzerland*

2016 George Wiswell, *USA*

2015 Dr. Eugenie Clark, *USA*

2015 Bob Kirby, *USA*

2014 Dewey Bergman and Carl Roessler, *USA*

2014 Alan Krasberg and Jerry O'Neil, *USA*

2013 Captain F. Bond, USN, *USA*

2013 Nick Icorn, *USA*

2012 Torrance Parker, *USA*

2012 Leonard Greenstone, *USA*

2011 Bob Hollis, *USA*

2010 Hugh "Dan" Wilson, *USA*

2010 Stanton Waterman, *USA*

2009 Dick Bonin, *USA*

2008 Bob Barth, *USA*

2007 Dr. Sylvia Earle, *USA*

2006 George Fletcher Bass, Ph.D., *USA*

2005 Bev Morgan, *USA*

2004 Henri Delauze, *France*

2003 Lad Handelman, *USA*

2002 Andreas Rechnitzer, Ph.D., *USA*

2001 Prof. Luigi Ferraro, *Italy*

2000 Dr. Christian J. Lambertsen, *USA*

1999 André Galerne, *France*

1998 Captain Philippe Tailliez, *France*

1997 Jacques Yves Cousteau, *France*

1997 Ellis Royal Cross, *USA*

1997 Prof. Hans Hass and Lotte Hass, *Austria*

### The Historical Diving Society E.R. Cross Award

The Award recognizes individual voluntary service to the mission and goals of the Society by a member in good standing. It is named in honor of American Master Diver E.R. Cross who was a Society Founding member.

#### Recipients:

2016 Fred Barthes #102, *New York*

2015 Buddy Ayers #1494, *Louisiana*

2014 Bonnie Toth #2477, *California*

2013 Ed Uditis, #95, *Massachusetts*

2012 Chris Swann, #133, *California*

2011 Janice Raber, #3506, *New York*

2010 Leslie Leaney, # 001, *California*

2009 Nyle Monday, #111, *California*

2008 Steve & Kristine Barsky, #245, *California*

2007 Kent Rockwell, #148, *California*

2006 Nicholas Toth, #117, *Florida*

2005 The Gallagan Family, #187, *Florida*

2004 Tom Squaciarini, #811, *Michigan*

2003 Andy Lentz, #460, *California*

2002 Greg Platt, #335, *Illinois*

2001 Bob Rusnak, #436, *New York*

2000 Sid Macken, #256, *Oregon*

1999 Bob Ramsay, # 623, *Australia*

1998 Ed Stetson, #760, *California*

1997 Torrance Parker, #002, *California*

1996 Peter Jackson, #262, *England*

1995 Lee Selisky, #508, *Minnesota*

1994 Jim Boyd, #101, *New Jersey*

### Historical Diving Society Nick Icorn Diving Heritage Award

The Award recognizes an individual, group, or organization that have promoted the importance of the history of diving to the public. The promotion of the history of diving may not be the primary focus of the nominee's career or organization. It must be outside of their normal professional capacity. The Award is named in recognition and honor of American scuba historian, Nick Icorn, who was a Society founding member.

#### Recipients:

2016 Dr. Andrés Clarós and Enrique Dauner,  
*Barcelona Spain*

2015 Ed LaRoche, *California*

2014 California Wreck Divers,  
*Los Angeles, California*

2013 Bob Barth and Dave Sullivan, *Florida*

2012 Iain MacQuarrie, *England*,

Bert and Karin Dodde, *Holland*

2011 Don Barthelmess, *California*.

2010 Ryan Spence, Flashback Scuba,  
*Washington*

2009 Aquazoo, *Dusseldorf, Germany*

2008 The Langley Family and the Museum of

Tropical Queensland, *Australia*

2008 Captain Don Johnson, The Lockwood

Pioneer Scuba Diving Museum, *Illinois*

2007 Sandy Lydon and Tim Thomas,

*California*

2006 Lucien Cabrolie, *France*, Jan de Groot,

*Holland*, Philippe Rousseau, *France*.

2005 Colin Taylor, *England*.

2004 The Scuba Show, *Long Beach,*

*California*

2003 Beneath The Sea, *New York*, and

Mares America, *Connecticut*

### The Historical Diving Society Leonard Greenstone Award

The Award recognizes safety professionals, groups, organizations or companies in the fields of commercial, scientific, military or recreational diving. It was established by Leonard in 1974 and supported by NAUI. Leonard withdrew the Award in 1997 and had deeded it to the HDS when he passed away in 2012. The Award was re-established by a team headed by HDS Chairman Dan Orr in 2014.

#### Recipients:

2015 Sylvester "Willy" Wilson

2014 Bob Christensen

1997 *Withdrawn*

1996 Reg Vallintine

1995 Dan Orr

1994 Dick Long

1993 Morgan Wells, Phd

1992 Trevor Davies

1991 Paul Heinmiller

1990 Karl Huggins

1989 Jim Corry

1988 John J. McAniff

1987 Albert J. Pierce

1986 James R. "Jimmy" Stewart

1985 Peter B. Bennett, PhD, DSc.

1984 Walt "Butch" Hendrick

1983 Arthur J. Bachrach, PhD

1981 Jefferson C. Davis, MD

1978 William High

1977 Charles V. Brown, MD

1976 Glen H. Egstrom, PhD

1975 Lee H. Somers, PhD

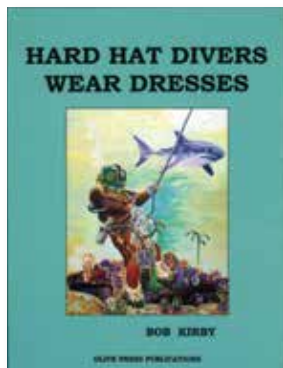
1974 Merrill Spencer, MD

For fuller details of recipients, Award criteria, and nomination process please log on to [www.hds.org/aboutHDS](http://www.hds.org/aboutHDS)



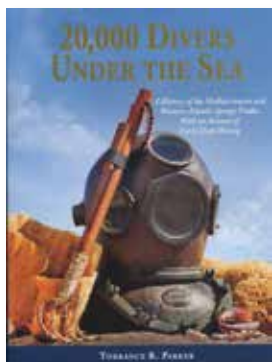
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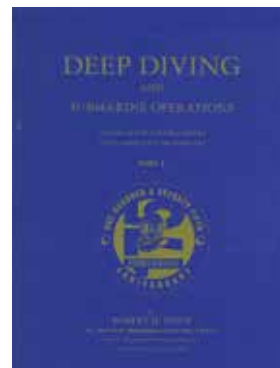
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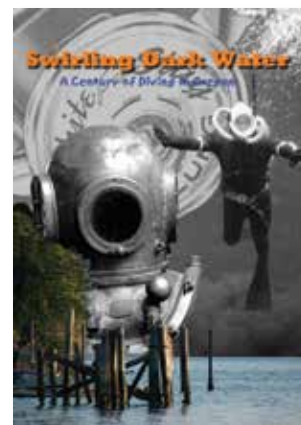
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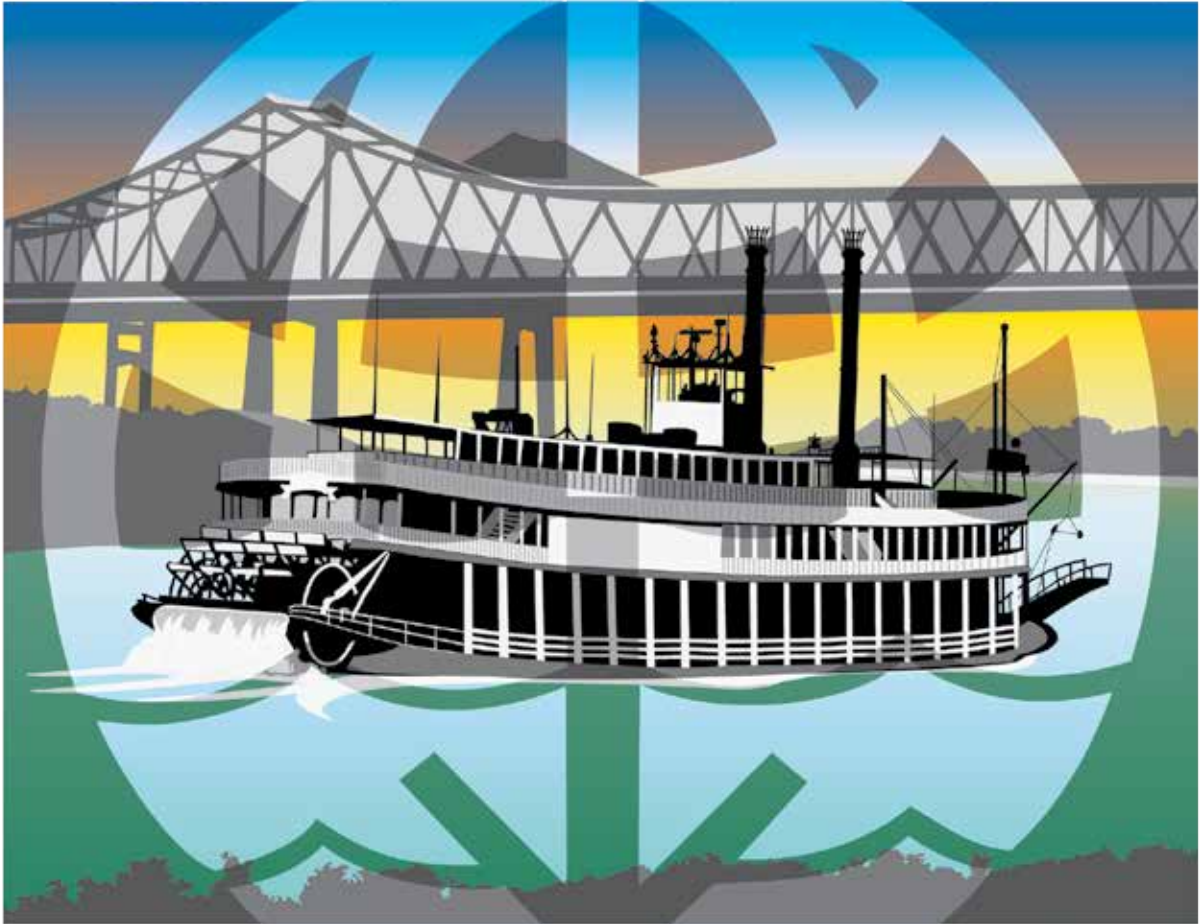
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Until the early 1990's, these two non-profit, professional organizations hosted separate conferences – ROV Intervention and the Diving Symposium. The increased common ground between the commercial diving and ROV (remotely operated vehicles) industries created an atmosphere ripe for a merger of the two conferences.

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